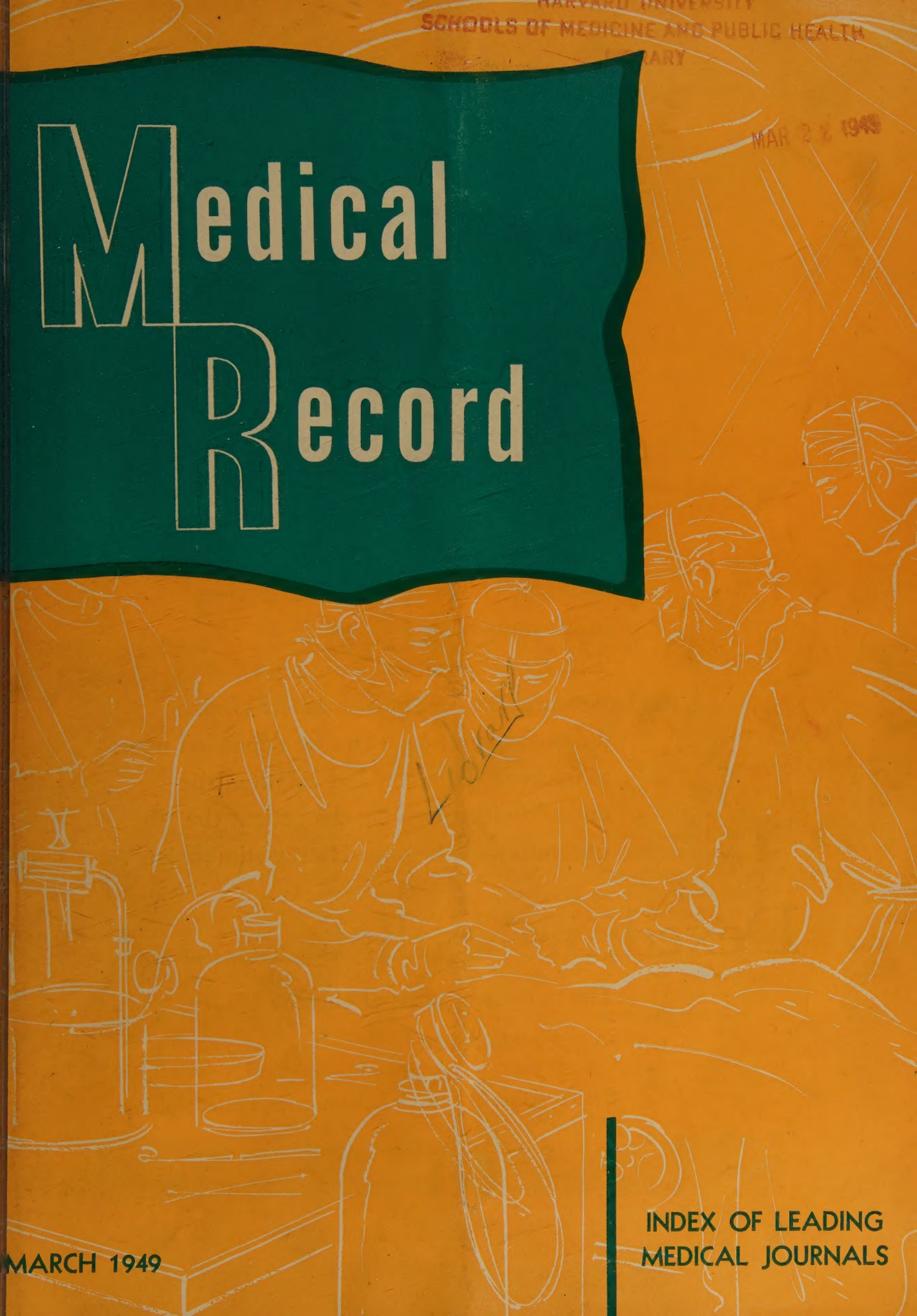
HARVARD UNIVERSITY
SCHOOLS OF MEDICINE AND PUBLIC HEALTH
LIBRARY
MAR 2 2 1949

Medical Record



INDEX OF LEADING MEDICAL JOURNALS

MARCH 1949

For a lady in distress

'Dexedrine' Sulfate relieves much of the distress of the menopause... by reawakening the patient's optimism and mental alertness ...by restoring her feeling of energy and well-being... by reviving her interest in life and living.

'Dexedrine' produces a uniquely "smooth" anti-depressant effect. Unlike d-desoxyephedrine, it can be depended upon to improve the mood and brighten the outlook without giving the patient the uncomfortable feeling of "drug stimulation".

Dexedrine* Sulfate Tablets & Elixir

The anti-depressant of choice in the menopause

Smith, Kline & French Laboratories, Philadelphia

*T. M. Reg. U. S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

HARVARD UNIVERSITY
SCHOOLS OF MEDICINE AND PUBLIC HEALTH
LIBRARY
MAR 2 2 1949

250,000 UNITS
In the Oral Prophylaxis of Gonorrhea

By means of a single orally administered dose of penicillin taken as soon as possible after exposure, and preferably within 2 hours, the development of gonorrhea can usually be prevented. In a recently reported preliminary study,* the incidence of infection was dropped from 43 cases in 3,616 liberties among untreated controls to 2 cases in 1,239 liberties; there is reason to believe the two infections may have been due to failure to take the medication after exposure.

The subjects received a single buffered tablet of penicillin containing 250,000 units. No contraindications to this practice were detected. Ideally, the penicillin should be taken within two hours after exposure, but some protection is afforded even after an interval of six to eight hours.

Tablets Buffered Crystalline Penicillin G Potassium-C.S.C., individually wrapped in foil, are supplied in two potencies: 250,000 units each and 500,000 units each, in boxes of ten. Either may be employed, depending upon the clinical situation.

*Eagle, H.; Gude, A. V.; Beckman, G. E.; Mast, G.; Sapero, J. J., and Shindledecker, J. B.: Prevention of Gonorrhea with Penicillin Tablets. Preliminary Report, Pub. Health Rep. *63*:1411 (Oct. 29) 1948.

C.S.C. Pharmaceuticals

A DIVISION OF COMMERCIAL SOLVENTS CORPORATION • 17 EAST 42nd STREET • NEW YORK 17, N. Y.

RIASOL

MAKES A *Big* DIFFERENCE IN

PSORIASIS

Actual photographs of patients before and after using RIASOL show what this effective prescription can do in psoriasis. In most cases clinical observations have shown the cutaneous patches fade away and gradually disappear, leaving a clear skin surface.

This big difference in therapeutic results gives the patient complete confidence in the doctor who has prescribed RIASOL. Many patients come for relief of psoriasis with a history of previous failures.

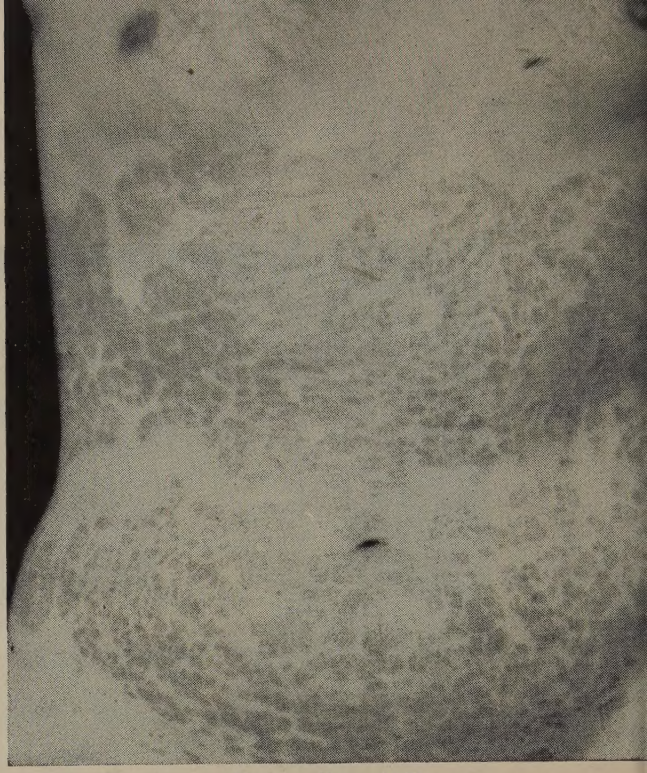
RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages necessary. After one week, adjust to patient's progress.

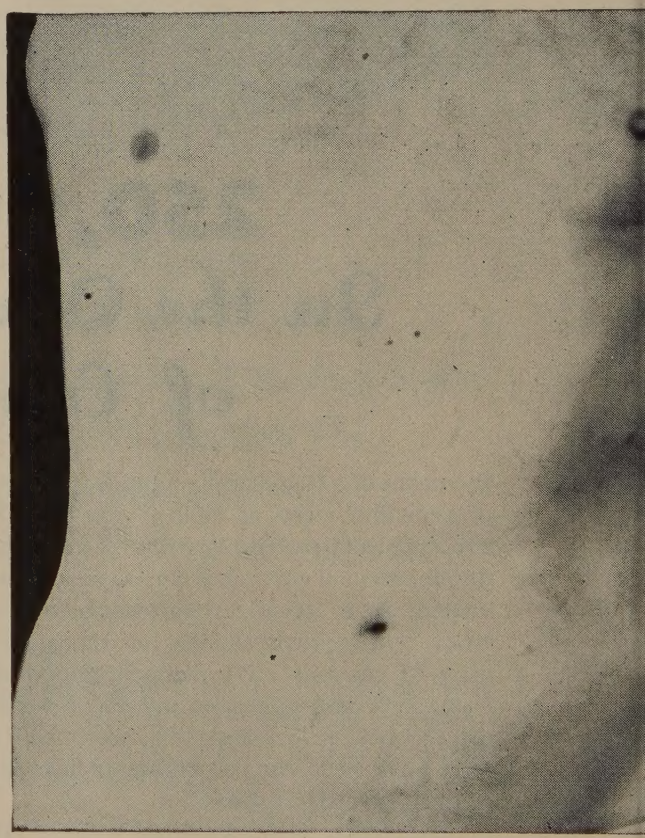
RIASOL is ethically promoted. Supplied in 4 and 8 fld. oz. bottles, at pharmacies or direct.

Mail coupon for your free clinical package. One trial will convince you of RIASOL's value as an antipsoriatic.

MAIL COUPON TODAY
TEST RIASOL
YOURSELF



Before Riasol Treatment



After Riasol Treatment

SHIELD LABORATORIES
12850 Mansfield Avenue, Detroit 27, Mich.
Please send me professional literature and generous clinical package of RIASOL.

.....M.D.....Stre

City.....Zone.....State.....

Druggist.....Address.....

RIASOL for PSORIASIS

MEDICAL RECORD

FORMERLY KNOWN AS THE MEDICAL JOURNAL AND RECORD
PUBLISHED MONTHLY BY
FOX-SHULMAN PUBLICATIONS

MARCH, 1949

EDITORIAL 21

PAPERS AND ADDRESSES

Heart Block

George Schwartz, M.D., New York, N. Y. 11

The Use of Thorium-X Alpha Ray in the Treatment of Cutaneous Diseases

Noah E. Aronstam, M.D., Detroit, Mich. 18

Secondary Nephrectomies

James F. McCahey, M.D., Philadelphia, Pa. 18

CRITIQUE 6

MEDICAL NEWS 8

CURRENT MEDICAL INDEX 26

Notice of undeliverable copies and correspondence should be addressed to the Executive Office.

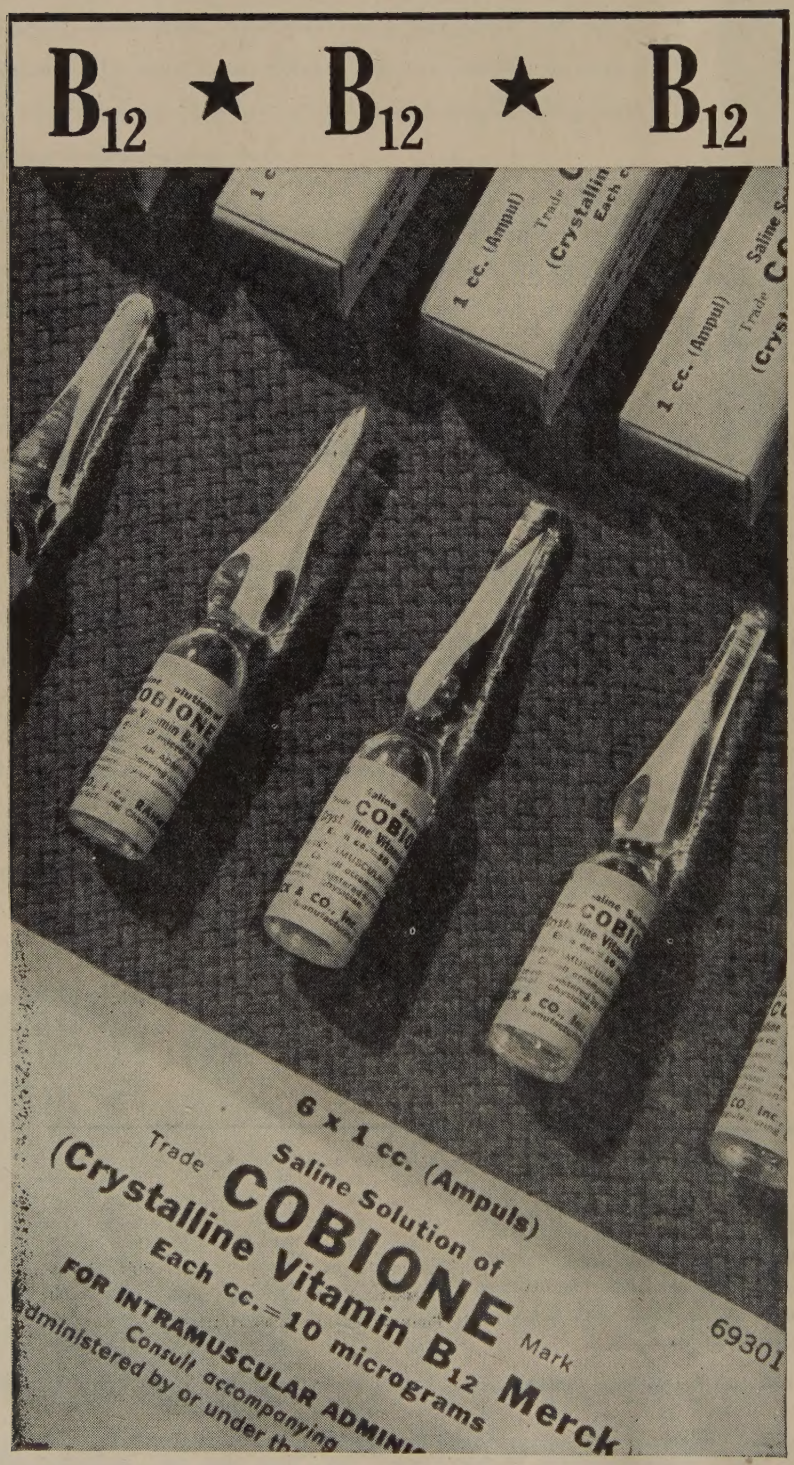
Entered as Second Class matter at the Post Office at Philadelphia, Pa., under the Act of March 3, 1879. Office of Publication, 5800 N. Marvine Street, Philadelphia, Pa. Editorial and Executive Offices, N. E. Corner 16th & Conlyn Streets, Philadelphia 41, Pa.

Copyright, 1949, by Fox-Shulman Publications.

VOL. 162, No. 3.
WHOLE No. 2793.

SINGLE COPIES ..... FIFTY CENTS
DOMESTIC YEARLY SUBSCRIPTIONS $5.00
FOREIGN YEARLY SUBSCRIPTIONS $6.00

Now Available..



FIRST isolated in the Merck Research Laboratories in 1948, clinical studies have demonstrated that Cobione* exhibits extremely high hematopoietic activity in the following conditions:

★ **PERNICIOUS ANEMIA**
In uncomplicated cases and those with neurologic involvement.
In patients sensitive to liver preparations.

★ **NUTRITIONAL MACROCYTIC ANEMIA**

★ **CERTAIN CASES OF MACROCYTIC ANEMIA OF INFANCY**

★ **SPRUE** (tropical and nontropical)

Cobione* Possesses Significant Advantages

- It is a pure, crystalline compound of extremely high potency, and no known toxicity, when given in recommended dosage.
- It is effective against all manifestations of pernicious anemia, including the neurologic manifestations.
- It is effective in, and well tolerated by patients sensitive to all liver preparations.
- It is effective in extremely low doses, because of its remarkably high potency.
- It may be administered in precise dosage, because it is a pure, crystalline compound.

*Cobione is the trade mark of Merck & Co., Inc. for its brand of Crystalline Vitamin B_{12}.

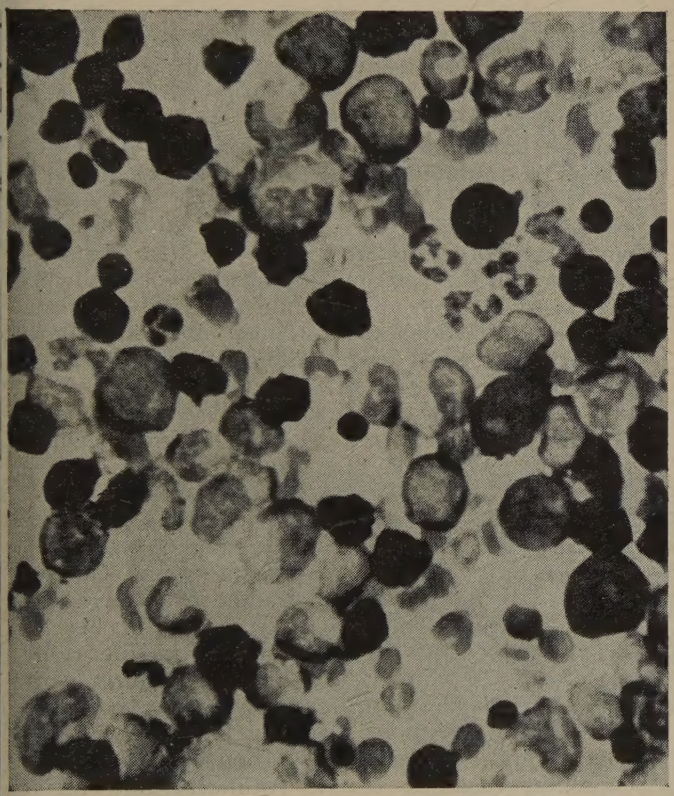
COBIONE

TRADE MARK

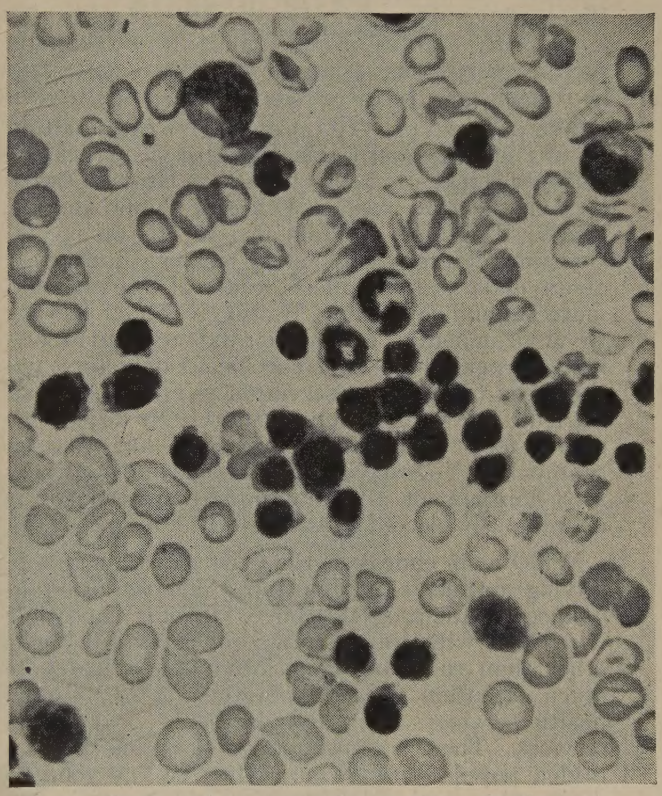
(CRYSTALLINE VITAMIN B_{12} MERCK)

★ ★ ★

Antipernicious Anemia Factor of Liver in Pure, Crystalline Form



Pernicious anemia before treatment with Cobione (Megaloblastic Bone Marrow)



Same patient ninety hours after a single injection of 0.025 mg. of Cobione

COBIONE

TRADE MARK

(CRYSTALLINE VITAMIN B_{12} MERCK)

MERCK

MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

CRITIQUE

What's WHO? WHO is the World Health Organization of the United Nations. The first World Health Assembly convened in the Palais des Nations, Geneva, Switzerland, on June 24, 1948, with 54 States (including the Union of Soviet Socialist Republics) represented. It is one of the largest specialized agencies of the United Nations today and represents all races, colors, creeds, and political philosophies. Public Law 643 (80th Cong.) which provided for U. S. membership in WHO presented an obstacle by reserving the right of this country to withdraw on one year's notice. Since the constitution of WHO made no provision for withdrawals this excited discussion until Dr. Nicolai Vinegradov, Deputy Minister of Health for U. S. S. R., expressing regret that the U. S. made such a reservation, suggested that its membership be recognized. In the absence of objection it was.

The program of WHO provides for continuation of established international health activities inherited from the League of Nations Health Organization, the International Office of Public Health, and UNRRA. Its program also calls for an aggressive campaign to rapidly extend technical knowledge about malaria, tuberculosis, venereal diseases, and maternal and child care. It also gives high priority to environmental sanitation and to nutrition—human requirements for specific food factors and their sources and preservation. The Food and Agriculture Organization of the U. N. deals with global food production problems. Dr. Andrija Stampar of Yugoslavia, who has served two years as Chairman of the Interim Commission, was unanimously elected President of the Assembly.

WHO will endeavor to assist governments in solving problems in the top priority fields announced in the program above. Insofar as possible it will act with the assistance of experts in fields other than those of top priority. It will devote much attention to the strengthening of national health services and, through them, local health services. There is growing awareness that disease-ridden populations are unproductive and tend to drain other national economies and to strain the world economy. An estimated 300 million annual cases of malaria and 50 million of tuberculosis may be cited in point, while preventable cases of other debilitating diseases run also into millions.

The Assembly took such action as was necessary to make WHO a part of the organizational family of the United Nations. It also gave special attention to the relationship between itself and the U. N. International Children's Emergency Fund. It established machinery to bring non-governmental organizations into fruitful relationships with itself. It elected an Executive Board representative of 18 states and divided the world into appropriate regions and areas to assist its future work. It also adopted budgets for 1948 and 1949, the latter in the amount of five million dollars.

The Assembly provided further evidence that health offers an unusual medium for effective and harmonious international cooperation. It was dominated by the same spirit of professional fellowship that characterized the International Health Conference in New York in 1946. The program adopted and the organizational pattern created both offer promise of real and immediate service in advancing health standards throughout the world. U. S. Delegates were Dr. Thomas Parran, Medical Director, Public Health Service, Federal Security Agency; Dr. Martha M. Eliot, Associate Chief, Children's Bureau, Federal Security Agency; and Dr. James R. Miller, Trustee, American Medical Association.

❦

The Commies: *Industrial and Engineering Chemistry* for May 1930 carried an alarming editorial to the effect that Soviet money was being used to upset our Government. It warned that we must not be complacent about the doings of communists and that we must transport to "more congenial surroundings" both alien advocates of communism and our own citizens who liked Marx as well. We must so regulate immigration that no one entered this country who wished to change our government in the slightest, for our institutions were in near and immediate danger. We must above all maintain peace, for civilization could not withstand another war. Is our democracy really so vulnerable and so easily demolished as these professional gentlemen seemed to think? What do you think now after nearly 20 years?

❦

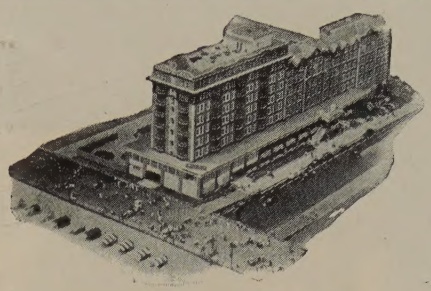
She sang baritone: Dr. Erwin Strassmann, Germany, in 1930 reported a woman who developed masculine characters. A beard appeared, making it necessary for her to shave frequently; her fat deposits in the right places, for a woman, disappeared; a prominent Adam's apple developed, and her voice became a pronounced baritone. A large tumor was discovered and removed by operation whereupon this character regained female rotundity and facial expression, but her deep voice lingered on. The tumor was said to contain testislike tissues.

❦

What became of this? In *Science* for March 21, 1930, Macht, of Johns Hopkins, reported finding in the blood serum of a pernicious anemia patient a substance extremely toxic to plants as compared with anything found in normal blood serum. His studies also revealed that the blood of sufferers from pernicious anemia always contained this substance which did not appear in the blood of those suffering from secondary anemia. Blood transfusions have little therapeutic value because the toxin developed again in a few days. Liver treatment of such patients did not diminish the quantity of this toxin in the blood. So what?

etards owth: Dr. Burton L. Baker of the University of Michigan School of Medicine recently reported that e purified hormone, adrenocorticotropin, proced by the pituitary gland, has remarkable owth-inhibiting properties. The next thing to d out is whether it will play a part in cancer ntrol. Dr. Dwight J. Ingle of Upjohn Research boratories collaborated. When rats were inted with the hormone their hair growth stopped er two weeks, the other layer of their skin beme thinner, and growth of certain long bones ased. The hormone also affected the lymphoid stem which, among other things, produces some the white blood cells. The hormone itself is not growth-inhibitor; instead it stimulates the adrenal nds to secrete other hormones which are responle for the retardation of growth. The studies are nificant but the discovery cannot yet be applied actically to human beings.

w it's raw bbage juice ulcers: Every day or so someone discovers something that cures ulcers. Most recently it was raw cabbage juice, reported by Dr. Garnett eyney of Stanford University Medical School. tients are required to drink a quart of the juice ly; the cure may be worse than the disease but ery extract may be used to make the beverage re palatable. First tested on 13 patients with g-standing ulcers, 11 lost their ulcers in six nine days. One case required a 23-day treatnt, and in one, while the ulcer disappeared, a mp appeared after eight days of cabbage juice rapy. The patients had ulcers of the duodenum of the stomach. Average healing time for the mer was 10.4 and the latter 7.3 days, as compared with 37 and 42 days respectively, when the ulcers are under conventional modes of treatment. It looks as if raw cabbage juice contains an as yet unidentified substance that heals ulcers.



HOTEL STRAND

ATLANTIC CITY'S HOTEL of DISTINCTION

Devoted to the wishes of a discriminating clientele and catering to their every want and embracing all the advantages of a delightful boardwalk hotel.

Spacious Colorful Lounges—Sun Tan Decks atop—Open and inclosed Solaria—Salt Water Baths in rooms—Garage on premises. Courteous atmosphere throughout.

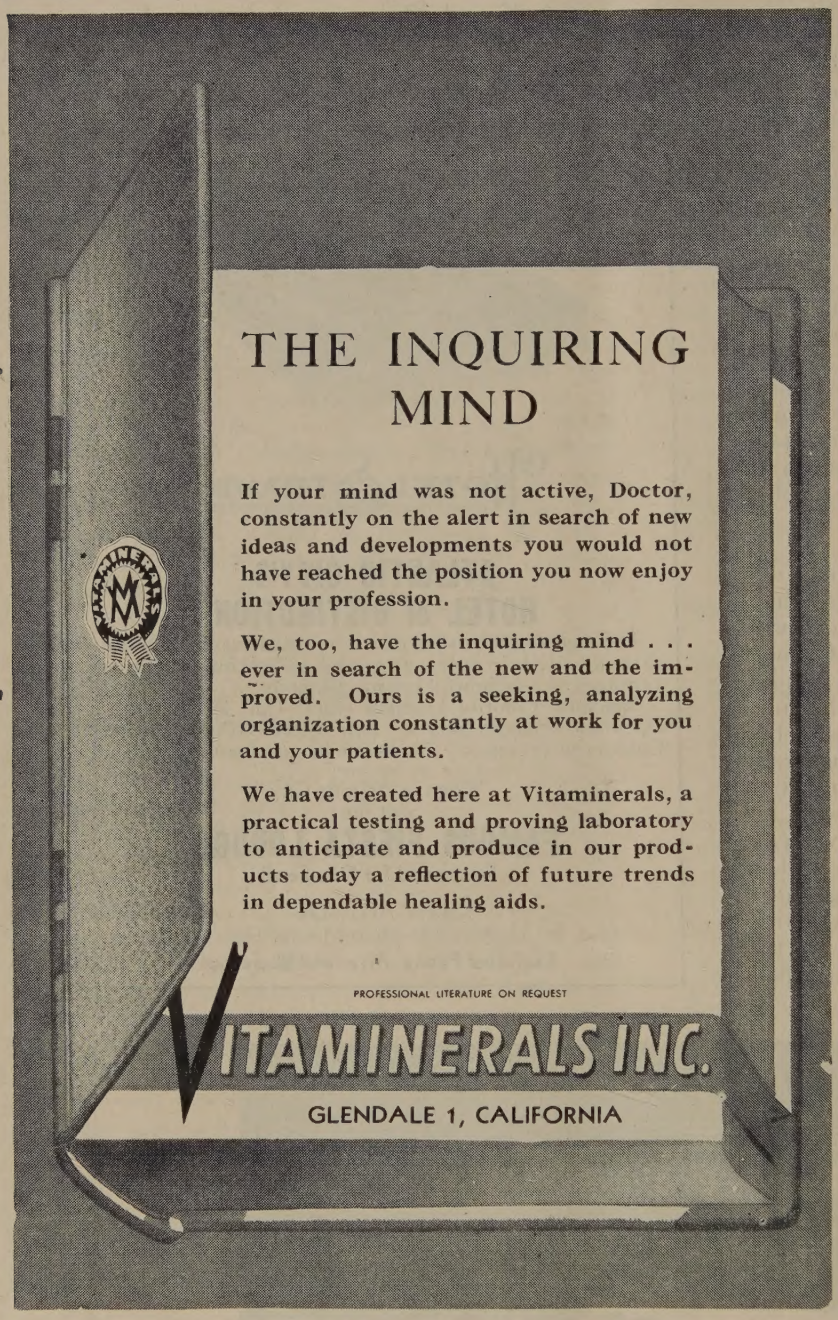
When in Atlantic City visit the

FAMOUS FIESTA LOUNGE

Renowned for Fine Food

OPEN ALL YEAR
Under Ownership Management
Exclusive Penna. Ave. and Boardwalk

Gentle, prolonged sedation...
PEACOCK'S BROMIDES
affords the gentle, prolonged sedation indicated in insomnia, hysteria, epilepsy, and the various neuroses.
OD PEACOCK SULTAN CO.
Pharmaceutical Chemists
4500 PARKVIEW • ST. LOUIS 10, MO.
OPS
Each teaspoonful contains 15 grains of pure bromide salts.
Peacock's BROMIDES


THE INQUIRING MIND
If your mind was not active, Doctor, constantly on the alert in search of new ideas and developments you would not have reached the position you now enjoy in your profession.
We, too, have the inquiring mind . . . ever in search of the new and the improved. Ours is a seeking, analyzing organization constantly at work for you and your patients.
We have created here at Vitaminerals, a practical testing and proving laboratory to anticipate and produce in our products today a reflection of future trends in dependable healing aids.
PROFESSIONAL LITERATURE ON REQUEST
VITAMINERALS INC.
GLENDALE 1, CALIFORNIA

MEDICAL NEWS

New Betatron for Cancer Research

A twenty-two million volt betatron, science's newest source of high-energy X-rays and electrons, now is being installed at the Illinois College of Medicine on Chicago's West Side for use in cancer treatment and research.

The University of Illinois will pioneer in medical use of this instrument invented in 1940 by Professor Donald W. Kerst of the school's physics department at Urbana.

Assembly and installation of the betatron is expected to be completed this month. At that time, the instrument will be placed into operation. Research projects will begin immediately and it is anticipated that the first patients will receive treatment this summer.

Specific research is planned on depth dose distribution, filtering, methods of monitoring, effects of field sizes, and investigation of clinical technique. Studies will also be made to determine effects of the betatron's X-ray beam on the brain as well as on cartilage and bone.

The building in which the new instrument is housed measures 26 feet by 48 feet. It contains a magnet room, control room, mechanical equipment room, and a transformer vault. Most of the structure is underground so that the surrounding earth provides an X-ray barrier.

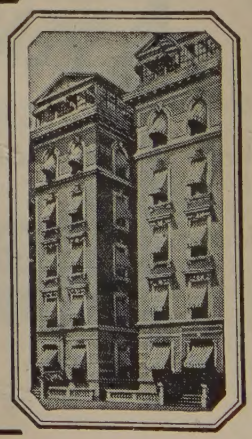
TOWNS TREATMENT FOR ALCOHOLISM AND NARCOTIC AND HYPNOTIC ADDICTIONS

Established 1901 *Now Generally Accepted*

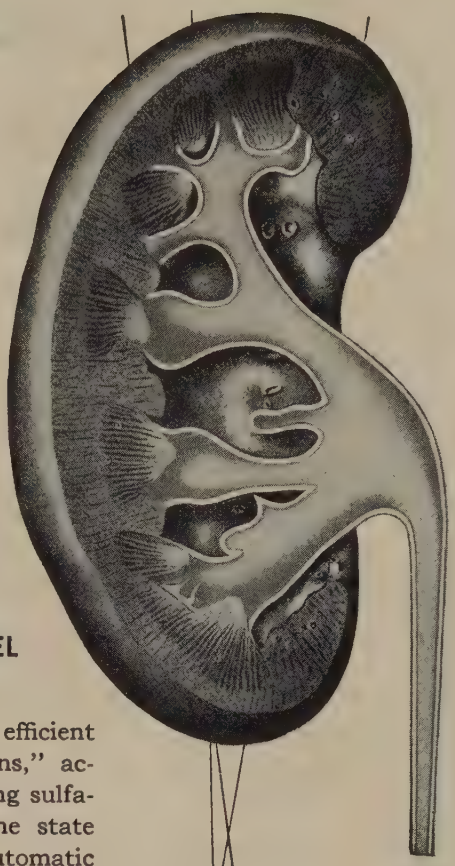
PROVIDES: (1) AN ASSURANCE OF A DEFINITE MEDICAL RESULT
(2) AN ASSURANCE OF LENGTH OF TIME REQUIRED AND EXACT COST
(3) AN ASSURANCE OF ABSOLUTE PRIVACY

Our "SYMPOSIUM OF MEDICAL OPINION" includes case histories of this successful treatment endorsed by many physicians. Copy on request.

CHARLES B. TOWNS HOSPITAL
FOR ALCOHOLISM AND DRUG ADDICTION EXCLUSIVELY
Completely redecorated and modernized
293 Central Park West, New York 24, N. Y. Tel.: SCHuyler 4-0770



A Higher Standard In Sulfonamide Therapy



REDUCED RENAL HAZARD
MORE RAPID INSTITUTION OF BLOOD LEVEL
AUTOMATIC ALKALIZATION

Use of sulfonamide mixtures, called "the most efficient single measure to minimize renal complications," accounts for the superiority of Aldiazol. Presenting sulfadiazine and sulfathiazole in a microcrystalline state together with sodiums citrate and lactate for automatic urinary alkalization, Aldiazol produces more rapid initial sulfonamide absorption, leads to satisfactory maintenance of therapeutic blood levels, and almost completely eliminates the danger of crystalluria (2 per cent). It does not burden the kidneys unnecessarily as does sodium bicarbonate alkalization. Aldiazol thus combines high efficacy with minimal toxicity. The palatability of this liquid preparation makes it especially useful in pediatrics. Indicated whenever sulfonamide therapy is called for.

SE M Co

Aldiazol

THE S. E. MASSENGILL COMPANY
Bristol, Tenn.-Va.
NEW YORK • SAN FRANCISCO • KANSAS CITY

New Vasoconstrictor
High in decongestant action . . .
Low in stimulant effects

The name of this new nasal decongestant is Wyamine.

In pharmacological and clinical tests, Wyamine shows high decongestant potency. Shrinkage of nasal mucosa starts quickly—3 minute average. Wyamine maintains this shrinkage well—up to 3 hours.

Extensive tests also show that Wyamine is remarkably low in cerebral stimulant effects.

No side-actions whatsoever in 85% of patients.*

Wyamine is available in an inhaler. Prescribe it wherever a vasoconstrictor with high decongestant potency . . . low stimulant action . . . is desired.

*(Side-actions in remaining 15%: *Mild excitement* (5%); *light headedness* (4%); *sleeplessness* —*due to use at bed-time* (3%); *slight dizziness* (3%). *No returgescence.*)

WYAMINE
TRADEMARK

Mephentermine
TRADEMARK

N-Methyl-Phenyl-Tertiary Butylamine

Wyeth
®

MEDICAL RECORD

PUBLISHED MONTHLY BY
FOX-SHULMAN PUBLICATIONS

VOL. 162, NO. 3. MARCH, 1949 WHOLE NO. 2793

HEART BLOCK

GEORGE SCHWARTZ, M.D.
New York 16, New York

In these hectic and awe-inspiring days in which the medical literature is consistently and richly endowed with verbose descriptions of the remarkable phenomena associated with anti-coagulant therapy, with operative procedures for the relief of anginal syndromes and elevated blood tensions, with limiting bed rest of acute coronary closures to two and three weeks regardless of graphic manifestations, with the advocacy of combined usage of digitalis and quinidine, with prophylactic administrations of the sulpha drugs in the rheumatic state, with arguments pro and con concerning the limitation or non limitation of fluids in cardiac decompensation, with 12 or more leads of the electrocardiogram, with unipolar leads, etc., ad infinitum, no physician practising at the bedside or in the laboratory can ever dismiss the profound and remarkable physiology, no physician can deny the questioning and speculative thoughts, and no physician can remain unimpressed with the earliest experiments of Stannius in 1852, in which he placed a ligature around the auriculo-ventricular junction of the frog's heart resulting in an unchanged rate of auricular contractions, whereas the ventricle after an initial pause contracted with a slower and independent rhythm; and further, in 1882, Gaskell clamped the auriculo-ventricular rings in the hearts of the tortoise and frog with ever-increasing pressure, and as the tightening increased, the interval between auricular and ventricular contractions gradually increased. With variations in the degree of compression, Gaskell caused the ventricle to respond to every second, third, or fourth auricular contraction, or to remain quiescent for a time, and then begin beating at its own independently slow rate. In the mammalian heart, His in 1895, Humblet in 1904, Hering in 1905, Erlanger in 1906 and others have corroborated the earlier epochal physiological experiments of Gaskell.

The phenomenon of impaired conduction and complete interdependence of auricles and ventricles is a life-saving measure of utmost import to the afflicted individual, yet under little or no control by the attending physician, somewhat disregarded of late in the literature, yet of sufficient significance to warrant reiteration of this state.

In general, the recognition of Heart Block and other types of arrhythmias depend primarily upon the knowledge of the conduction system and the utilization of the electrocardiogram; for clinically much difficulty is encountered and conjecture, at best, is unsatisfactory and leaves much wanting for the diligent physician.

The conduction system is composed of a specialized "embryonal" muscular type of tissue, through which the muscular units of the heart are coordinated in their action. The nature of the wave of excitation, a form of electrical energy which may be registered on a galvanometer, need not concern us in this discussion. The sino-auricular node is known as the pacemaker, inasmuch as the stimulus to contraction is initiated in this area and spreads through the remainder of the conduction system to reach every muscular unit. This node lies in front of the lateral portion of the superior vena cava in a sulcus where the vein joins the right auricle. It is spindle-shaped, measuring one cm. by three mm. by one mm. Small processes from it spread into the auricular musculature. The auriculoventricular node is about six mm. by three mm. by one mm. It lies in the lower portion of the atrial septum. The Bundle of His originates from the auriculoventricular node and courses through the septum membranaceum. It is about one cm. in length and shaped as a narrow flat band. It can be located best just under the posterior cusp of the aortic valve. At the upper margin of the muscular inter-ventricular septum the main stem divides into two branches. The right bundle arises beneath the cusp of the tricuspid valve, courses downward beneath the endocardium

into several branches; one of the main stems passes to the right ventricular wall and there subdivides. The left bundle branch is located beneath the posterior aortic cusp and passes downward subendocardially toward the apex. The subdivisions ramify over the lateral wall of the left ventricle. The purkinji system ramifies over the entire walls of both ventricles subendocardially as a network of terminal twigs of the sub-bundle branches. They penetrate into the muscle substance and are distributed to each muscular unit. Histologically the conduction system is distinguishable from the muscular tissue except in the connection between the muscle fibre and the purkinji terminals. Pathologically, trauma of the muscle likewise traumatizes the conduction system; thus mechanical, thermal, toxic, infectious and malnutritious trauma stigmatize the conduction system.

Sino-auricular block is rare and relatively unimportant, and requires no therapy unless it results in syncope; and then ephedrine sulphate or atropine sulphate may well prove effective. This disturbance in conduction occurs when the normally formed impulse in the sino-auricular node is blocked before it reaches the auricular musculature.

Auriculoventricular block is more common and possesses a greater import, and occurs following digitalis administration, in the course of acute infections as in rheumatic fever and diphtheria, and finally, in the course of chronic organic heart disease whose etiology essentially is coronary artery disease; less frequently rheumatism, hyperthyroidism and lues.

Auriculoventricular block may be divided into three categories, (1) First degree heart block, characterized by a delayed conduction time in which the impulses are delayed in their passage but eventually reach the ventricles; (2) Second degree heart block characterized by partial heart block in which the impulses experience an increasing difficulty in their passage and eventually one impulse is finally blocked, giving rise to the so-called Wenckebach's phenomenon; or blocking may characteristically occur every two or three beats or so with the resultant nomenclature of two to one, three to one, etc., block; these two states may likewise be termed incomplete heart block; (3) Third degree heart block characterized by complete dissociation of the ventricular and auricular contractions in which the impulses are prevented from reaching the auriculoventricular node, and the auricles respond to the stimuli from the sino-auricular node whereas the ventricles respond to stimuli in the auriculoventricular node or in the Bundle of His.

Characteristically all complexes in the abovementioned states are normal for that particular heart since no pathology exists in the pathway of the spread of the wave of excitation, merely there exists a delay or a loss of the wave of excitation

Bundle branch block is somewhat commonly found, and left sided block more frequently than right sided block, and is characterized by the circuitous route established by an impulse which may normally arise from the sino-auricular node and due to a block at either the right or left branch of the Bundle of His descends the unblocked branch and then through either the ventricular septum or the myocardium reaches the blocked myocardium in a roundabout or unusual route. The circuitous route of the wave of excitation manifests itself in bizarre and aberrant QRS complex formation, characterized by notched and widened QRS, increased voltage of the QRS usually and a T wave which is directed opposite to the major ventricular deflection.

Diagnosis, clinically, is occasionally accomplished when a diastolic gallop rhythm, a reduplicated apical impulse and pulsus alternans are elicited and properly evaluated. However reiteration at this point may possess some value and that is, electrocardiography is oft times essential in the recognition of this phenomenon, especially so as it so often occurs as a regular type of rhythm.

Bundle branch block is pathognomonic of myocardial damage and is usually associated with previous or present disease whose etiology are such disease entities as hypertension and coronary artery disease.

Intraventricular block occurring as either a delay in the passage of the normally formed wave of excitation or impulse through either the right or left branch of the Bundle of His giving rise to an incomplete block, or as a definite block in the branches of the Purkinje fibres, is characterized by bizarre QRS complexes in which they are widened and notched, but the T wave may or may not be involved in graphic changes depending upon the site of block. In the latter case, the further the origin of the block from the source and course of the wave of excitation or impulse, the less dominent are the T wave changes.

In sino-auricular block, neither the auricles nor ventricles receive their respective wave of excitation and thus no contraction occurs with the resultant loss of a complete heart cycle. If observed carefully, it will be discovered that the apparent refractory stage is equivalent in time to the time usually utilized by two normal heart contractions. This form of arrhythmia rarely is subjectively manifested; however, in some rare instances two or three successive impulses are blocked, resulting in a fairly severe grade of syncope, compelling a more thorough analysis of the underlying pathology.

In auriculoventricular block, the normal conduction time, or as otherwise described as the P-R Interval, measuring some 0.12 seconds to 0.20 seconds, is described as prolonged above the latter time element. The diminution of the dosage of digitalis within an appreciable period of time may decrease the prolonged P-R interval, or the elimination of this medication will—if it is the cause of the prolongation—entirely obliterate the prolongation. When the acute states of either rheumatism or diphtheria clear, then the prolongation of the P-R conduction time will usually return to a normalcy, though often a permanent stigmata occurs here. If occurring in the course of chronic organic heart disease whose etiology essentially is coronary artery disease, then a prolongation of this interval remains indefinitely and as time goes on its pathological significance may become progres-

sive in nature, in an actual increase of this interval and eventually becoming the precursor of complete heart block or third degree heart block.

The Wenckebach Phenomenon and the 3:2 or 2:1, etc., rhythm are well recognized mechanisms and easily differentiated on electrocardiography. However, clinically they may prove disturbing in attempting analysis and diagnosis. A 3:2 block may simulate coupling, a 2:1 block may simulate a normal bradycardia or complete heart block. Physical exercise, breathing, carotid pressure, drugs such as atropine or amyl nitrite will markedly accelerate the rate of a normal bradycardia, whereas these activities and drugs will leave a complete heart block unaffected or but slightly accelerate the rate since in complete auriculoventricular block due to a lesion transecting the bundle, the ventricles are beyond vagal control, their rate and force of contraction not being influenced by the aforementioned atropine and amyl nitrite; or activities as carotid sinus pressure, etc. They may still, however be accelerated by adrenalin, because the sympathetic supply to the ventricles is not abolished. Again these drugs and activities may change the length of the heart cycle in partial block. Atropine or amyl nitrate may lessen the degree of partial block by diminishing the vagal tone, and vagal stimulation may increase the block and slow the heart the further.

Therapy directed towards the elimination of partial block is indeed unnecessary and inconsequential unless definite syncope results, due to the sufficiently prolonged ventricular diastole manifesting itself in a severe grade of cerebral ischemia, the duration and severity of an attack depending upon the length of ventricular diastole. When this state accompanies digitalis medication, the elimination or diminution of the drug, eventuates into a return to normal conduction time; when accompanying such acute infections as the rheumatic state or diphtheria, convalescence will eventually eliminate the prolonged P-R interval or the stigmata may persist; accompanying chronic organic disease, as stated previously, its permanence may be disregarded always recalling to mind that if progressive, it is an indication of the insidiously progressive underlying pathology of the disease entity in question. Atropine sulfate inhibiting the vagus occasionally eliminates partial heart block entirely.

Third degree heart block or complete heart block is characterized by a complete dissociation between auricular and ventricular contractions, each usually regular but contracting independently of each other, each responding to its respective pacemaker, the former in the sino-auricular node, the latter in the auriculoventricular node or within the Bundle of His. Since the respective pathways of the waves of excitation bear no pathology, it follows that the resultant complexes will possess a normal appearance for the heart in question. Usually the auricular rate hovers between 60 and 100, the ventricular rate is inherently slower at about 30 to 40 per minute; with greater rates occurring in children and in congenital heart block, which will be discussed later. And an axiom may be stated that, the higher the block in the ventricular conducting system, the faster the rate; the lower the block in the ventricular conducting system, the slower the rate; similarly is this true of the influence of the vagus, which at best is poor in the ventricles, nevertheless the upper portion of the auriculoventricular node is slightly under the influence of the vagus and this effect is diminished in the lower portions of the junctional tissue.

And as previously stated in partial block, complete auriculoventricular block is caused by digitalis, the infectious states, and the organic chronic heart disease entities.

In auriculoventricular block a very striking, series of symptoms, the Adams-Stokes syndrome is frequently observed. The first case was recorded by Morgagni in 1762, was followed by those of Spens in 1793, by Adams in 1827 and by Stokes in 1846. The syndrome is characterized by syncopal or epileptiform seizures due to cerebral anaemia, whatever the nature of the cardiac disorder. If this be only of a few seconds duration, it may cause sudden transient dizziness or a sensation of faintness; if the standstill last for about five or six seconds, there will probably be transient loss of consciousness with pallor of the face; if the standstill last for 10 seconds or more, convulsions both tonic and clonic, usually supervene; if for several minutes then death ensues. During a seizure of the utmost gravity, the patient lies unconscious and motionless, the face like that of a corpse, ashen-grey, the eyes glassy and dull, the pupils widely dilated; no breath is drawn save for a gasp every thirty seconds or so, no pulse is felt, no heart sound is heard for a period of two to three minutes, the sphincters become relaxed. Then the face flushes pink, the pulse and heart sounds return, and breathing is resumed. Consciousness is usually regained within a few seconds, but a period of 15 to 30 minutes may elapse before the patient is fully aware of his surroundings.

The subjective and objective characteristics associated with the Adams-Stokes syndrome, is the result of an actual causal and effect relationship between respiration and circulation as described by P. Formijne. (1) With the onset of the attack, all blood flow ceases. Respiration continues, giving the blood resident and stagnant within the lungs the opportunity of becoming hyperventilated or hyper-saturated with oxygen, and to markedly decrease its content of carbon dioxide than ordinarily is present. With recovery from cardiac standstill, the first substantial cardiac contraction transmits its pooled hyperventilated and hypersaturated oxygenated blood. When the hyperventilated blood strikes the respiratory center, then apnea results. The patient's color undergoes a marked change with the arrival of super-oxygenated blood into the capillaries of the face. The convulsive movements that follow arise from the greater alkaline state of the blood since the hyperventilation, while the blood was stagnant within the pulmonary fields, removed an excess of carbon-dioxide. Therapy, thus, is directed at the attacks of syncope once the acute phase of the causative illness is over. At the sudden onset and frequent occurrence of Adams-Stokes syndrome, the subcutaneous administration of adrenaline every two

hours both day and night in the dosage of five to 10 minims of a 1:1000 solution will prove most effectual. Adrenaline increases the irritability and the force of contraction of the myocardium and also accelerates the rate of contraction. Not only may adrenaline relieve a partial block, but may accelerate the ventricles even when they are wholly disassociated by permanently complete auriculoventricular block, and may abolish the recurrent ventricular standstill which leads to the syncopal and epileptiform seizures. If adrenaline proves efficacious by subcutaneous injection—not to be administered intravenously—benefit may be obtained by its frequent use in the form of an intranasal spray. Atropine sulfate grains 1/100 or 1/50 administered subcutaneously occasionally is effective but never arrests or lessens the frequency of the syndrome. The administration of digitalis is definitely contraindicated since it aggravates defective conductivity, or prolongs conduction time, thereby promoting the onset of the syndrome.

There are other medications which have been attempted and will merely be mentioned for completeness of this presentation. Metrazol (cardiozol) possesses a camphor-like action and is administered in one-half to one cc. of a 10 per cent solution subcutaneously, and given orally and repeated. Its only beneficial action comes about through its stimulation of the vaso-motor tone and respiration. Thyroid has been administered for prophylaxis in one-half to three grain dosage daily since it may increase the basal metabolic rate to a level where cardiac output becomes increased and thus the development of cerebral anaemia becomes unlikely; however in the presence of an anginal syndrome it should be avoided or utilized with a good deal of caution. Recently the utilization of benzidrine sulfate (amphetamine sulfate) orally in 10 mg. dosage (one-sixth grain) and repeated appears to have altered complete heart block, with a return to a normal sinus rhythm. Amphetamine is closely related chemically to ephedrine and epinephrine and possesses similar pharmacologic properties, and thus its action should readily enough be surmised. In the so-called ambulatory patient, three-eighths or three-quarters of a grain of ephedrine sulfate administered orally three or four times daily, over a protracted period of time, is effectual. I am not at all impressed with the efficacy of barium chloride even in one grain dosage, since its action depends on increasing the irritability of the ventricles to such an extent as to provoke the formation of extra-systoles thus producing a more frequent expulsion of blood into the arterial circulation and thus lessening the probability of cerebral ischemia. Here a short and brief reference to the administration of quinidine sulfate should be included. Although this desirable agent in our armamentarium has been especially advocated by my coworkers and myself in several papers published, yet in this type of arrhythmia, quinidine should never be utilized despite its many advantages, since it also tends to increase the inhibition of contractions by prolonging or adversely affecting the conduction times.

It should be stressed that unsymptomatic heart block should receive no active therapy as this rhythm is perfectly compatible with life, even a fairly strenuous life employed in laborious activities. In other words a rate of 30 to 40 unaccompanied by subjective manifestations, requires no active therapy.

The question as to the gravity of the prognosis in auriculoventricular block is, in my opinion, open to question. Undoubtedly, the degree of the block and its etiological factor are important, for they are a distinct indication of the severity of the underlying pathology. Block caused by an acute inflammatory reaction, may readily subside with scarcely recognizable stigmata within the electrocardiogram. Block caused by drugs as digitalis will readily disappear within a reasonable period of time after the medication is withheld or decreased in dosage. Block caused by acute or chronic arterial disease will unquestionably remain in status quo or increase in severity, or following the acute stage disappear entirely; yet complete block is not incompatible with longevity; and with the causative lesion quiescent, danger of further complications as fibrillation or complete standstill, etc., is rather remote.

Bundle Branch Block presents an interesting academic question as to prognosis. Because this entity occurs most frequently in the course of a hypertensive or a coronary artery state, and because disease of the left ventricle is more common and possesses a more serious import than does disease of the right ventricle, it is commonly believed that prognosis of left bundle branch block is indeed the more critical. However, the thought concept of a more guarded prognosis, and a much shorter life expectancy in cases of left bundle branch block as compared to right bundle branch block is open to serious questioning, as evidenced by numbers of cases observed over the years.

As to necessary therapy, it should be emphasized that no specific therapy exists, or need be employed to obviate the bundle branch block itself, for again, in itself it is asymptomatic and recognized only graphically; yet therapy must and should be directed against the underlying pathology of the disease entity which is manifested either clinically or by laboratory manipulation, as for example, the electrocardiogram.

And finally in this discussion concerning prognosis and therapy, all that has been mentioned and stressed relative to bundle branch block pertains equally as well to intraventricular block of either the incomplete bundle branch block or the arborization block types. The graphic changes noted are merely a reflection of the underlying pathology, and the more bizarre and aberrant are the complexes, the greater the structural and organic damage, and thus necessarily, the more grave the prognosis. Therapy again is directed at the underlying pathology. In these graphic entities, manifestations occur which ofttimes are not corroborated on clinical analysis, yet their very presence alters or should alter the concept of disease of the myocardium in the individual instance.

Two rarities may perhaps be casually mentioned.

Congenital heart block may either be partial or complete, and histological studies confirm a

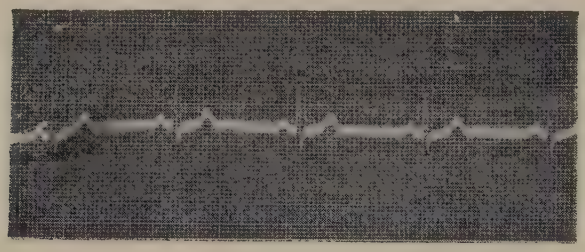
development anomaly rather than that of an inflammatory process. The developmental anomaly consists of defective interatrial or interventricular septi, which actually are not concerned with the block. The auriculo-ventricular node may be separated from the Bundle of His, or may be nonexistent. The Bundle of His may not be present in its entirety. Extensive fibrosis may be present. Otherwise the highly specialized neuromuscular structure appears to be intact and follows the periphery of the patent septum.

Rarely, rarely indeed, primary neoplasms rather than metastatic ones cause heart block. Atrial angiomata, and lymphangio-endotheliomata are the lesions described.

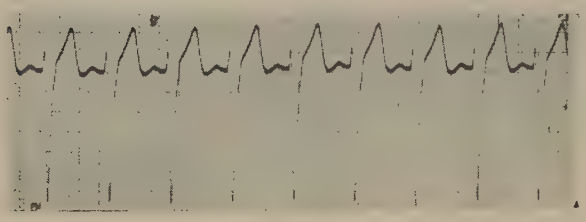
In an attempt to evaluate the prognosis of heart block, Dr. Millman carefully scrutinized the literature for actual case reports and his investigations proved most discouraging. Essential data as to etiology, therapy, longevity, onset, diagnosis, etc., were often omitted so that the table presented below is rather incomplete, yet included to demonstrate, "the character of underlying disease rather than the presence or absence of intraventricular block determines the prognosis, although intraventricular block carries with it a high mortality rate the first year and particularly in the first three months. High mortality rate within a year of discovery of the lesion. Patients surviving this period have a better life expectancy. Neither the configuration of the electrocardiogram nor the durations of the QRS deflection is of prognostic importance."(2)

TABLE I—CASES IN LITERATURE

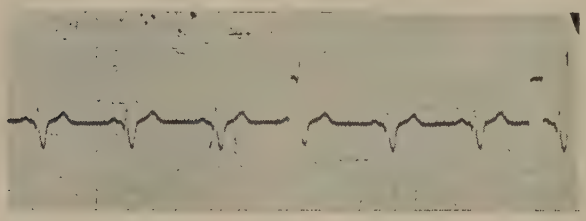
Case No.	Etiology	Age	Sex	Diagnosis	Longevity	Cause of Death
25	Rheum. Fever? Congenital?	26	F	Complete A. V. Block 2 pregnancies	3 yrs. plus	——
3	Rheum. Fever	25	M	Comp. A. V. Block	1 yr. 9 mo.	Congestive Ht. Failure; Aur. Flutter
8	Rheum. Fever	24	M	Atypical Lt. BBB	5 yrs. 8 mo. plus	——
32	Rheum. Fever	64	M	Comp. A. V. to 2:1 to Rt. BBB	1 yr. plus	——
21	Rheum. Fever and Hypertension	60	F	Rt. BBB	2 yrs. plus	——
6	Hypertension	68	F	Lt. BBB	3 yrs. 8 mo.	?
9	Hypertension	78	F	Rt. BBB	5½ mo.	?
10	Hypertension	69	F	Atypical Rt. BBB	1 yr. 7 mo. plus	——
14	Hypertension	72	M	Lt. BBB	3 yrs. 11 mo. plus	——
20	Hypertension	61	M	Complete 1943 2:1 1944	3 yrs. plus	——
12	Hypertension and Art. Sclerosis	50	F	Lt. BBB	10 mo. plus	——
15	Hypertension and A. S.	75	M	Lt. BBB	1 yr. plus	——
16	Hypertension and A. S.	74	F	Comp. Ht. Block— Occasional 2:1	5 yrs.	Cerebro-vascular accident
18	Hypertension and A. S.	68	F	Comp. Ht. Block	3 yrs.	Myo. Infarction
19	Hypertension and A. S.	73	F	Comp. Ht. Block	9 yrs. plus	——
24	Hypertension and A. S.	73	F	Comp. A-V Block	1½ yes. plus	——
26	Hypertension and A. S.	56	M	Lt. BBB 1938 Normal 1942	4 yrs. plus	——
30	Hypertension and A. S.	76	M	Comp. Block	1 yr.	Syncope
27	Hypertension; A. S.; Cor. Thrombosis	49	M	?	10 mo. plus	——
17	Arteriosclerosis	68	M	Comp. Block due to dig. to 3:2 block to prolonged P–R	2 yrs.	?
7	Cardio Renal Dis.	54	M	Atypical Lt. BBB	4 yrs. 11 mo.	?
11	Cardio Renal Dis.	75	F	Rt. BBB	5 mo.	Uremia
13	Cardio Renal Dis.	—	M	Lt. BBB	5 mo. plus	——
4	Lues	67	M	Lt. BBB	9 mo.	Luetic Ht. Dis.
5	Lues	53	M	Lt. BBB	7 yrs. plus	——
23	Lues	54	M	Lt. BBB to normal	1½ yrs. plus	——



Normal Sinus Rhythm

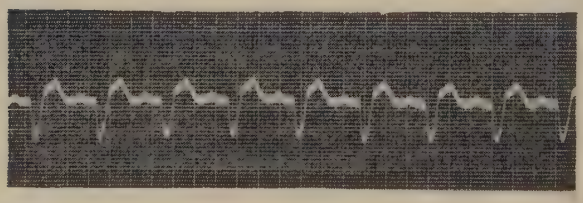


1. Lt. B.B.B.

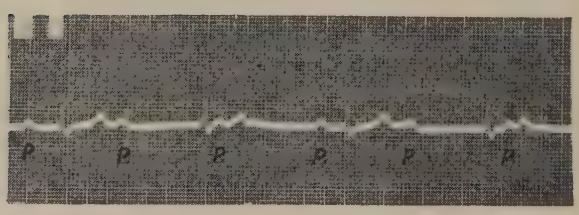


2. Rt. B.B.B.

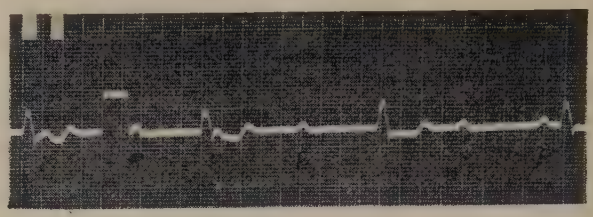
3. Lt. B.B.B.



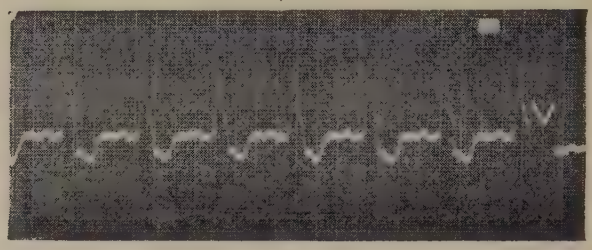
4. Lt. B.B.B.



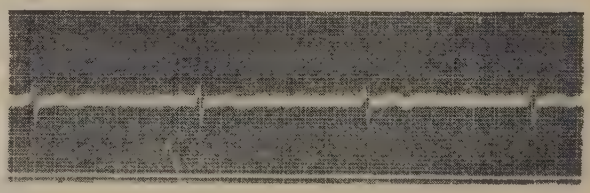
5. Complete Ht. Block
Aur. Rate 64 Vent. Rate 44



6. Complete Ht. Block
Aur. Rate 80 Vent. Rate 40

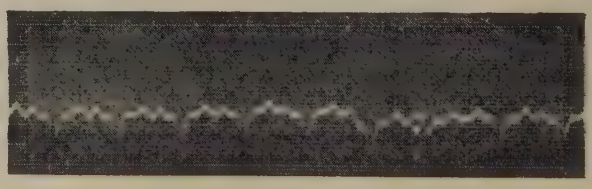


7. Lt. B.B.B.

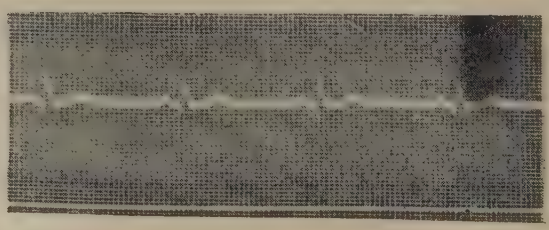


8. Aur. Fibrill. and Idio-Ventric. Rhythm

9. 2:1 Block
Aur. Rate 80 Vent. Rate 40



10. Atypical Lt. B.B.B.



Sinus Bradycardia

Case No.	Etiology	Age	Sex	Diagnosis	Longevity	Cause of Death
22	Fatty Infiltration of the Intra-Vent. Septum	59	F	2:1 Block Comp. Block (Dig.)	110 days	Fatty Infiltration (autopsy)
31	Hemochromatosis and Diabetes	35	M	Comp. A-V Block	3 mo.	Hemochromatosis and diabetes
28	?	30	M	Rt. BBB	1½ yrs. plus	——
29	?	21	M	Lt. BBB	3½ yrs. plus	——

Cases of the writer and those seen in consultation with other physicians are briefly tabulated to lend further credence to the thought concept that intraventricular conduction defect is compatible with longevity per se.

Case No.	Etiology	Age	Sex	Diagnosis	Longevity	Cause of Death
1	Hypertension and Art Scl.	72	F	Lt. BBB	4 yrs. plus	——
5	Hyp. and A. S.	64	M	Comp. Ht. Block	10 yrs. plus	——
7	Hyp. and A. S.	74	F	Lt. BBB	16 yrs. plus	——
10	Hyp. and A. S.	50?	M	Atypical Lt. BBB	1¼ yrs. plus	——
11	Hyp. and A. S.	67	M	Atypical Lt. BBB	2 mo. plus	——
2	Arteriosclerosis	65	M	Rt. BBB	6 yrs. plus	——
3	Arteriosclerosis	65	M	Lt. BBB	1½ days	Acute Coronary Occlusion
4	Arteriosclerosis	67	M	Lt.BBB	1½ yrs. plus	——
6	Arteriosclerosis	42	M	Complete Ht. Block	5 yrs. plus	——
8	Arteriosclerosis	56	M	Aur. Fib and Idio-vent. Rhythm	4 yrs. plus	——
9	Arteriosclerosis	45	M	2:1 Block Atypial Rt. BBB	4 yrs.	Pneumonia
12	A. S. and Toxicity	43	M	Lt. BBB	3 weeks	——

Conclusion: It would appear that the character of the underlying disease, or the presence of intercurrent infections or other acute episodes, rather than the type of intraventricular block determines the prognosis and longevity.

I should like to express my appreciation to Dr. Nathan Millman for his extensive review of the literature, which proved rather a burdensome task.

BIBLIOGRAPHY

1. Formijne, P.: *Amer. Heart Jour.*, Vol. 15, 1938.
2. Katz, L. N., Kaplan, L. G.: *Amer. Heart Jour.*, Vol. 18, p. 145, 1939.
3. deMoura, Jose P. Z.: *Amer. Heart Jour.*, Vol. 32, no. 6, p. 794, Dec. 1946.
4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14. Middleton, H. N.: *Jour. of Indiana Med. Ass'n.*, Vol 38, p. 40, Feb. 19, 1945.
15. Simonson, E., Enzer, N., Goodman, J. S.: *Amer. Jour. Amer. Sciences*, Vol. 209, p. 349, Mar. 1945.
16. Rytand, David A.: *Amer. Heart Jour.*, Vol. 52, no. 5, p. 579, Nov. 1946.
17, 18, 19, 20, 21. Middleton, H. N.: *Jour. of Indiana Med. Ass'n.*, Vol. 38, p. 40, Feb. 19, 1945.
22. Spain, David M., Cathcart, Richard T.: *Amer. Heart Jour.*, Vol. 32, no. 5, p. 659, Nov. 1946.
23. Nolan, D. E., Lt. Col., Pedigo, George W., Capt., A. U. S.: *Minnesota Med.*, Vol. 29, p. 582, June 1946.
24. Parsonnet, A., Bernstein, A., Klosk, E.: *Amer. Heart Jour.*, Vol. 31, p. 769, June 1946.
25. Quintin, T. J.: *Canadian Med. Ass'n. Jour.*, Vol. 55, p. 600, Dec. 1946.
26. Kalett, Joseph.: *Amer. Heart Jour.*, Vol. 20, p. 120, Jan. 1945.
27, 28, 29. Booker, Joseph M.: *Med. Annals, Dist. of Col.*, Vol. 15, pp. 1–14, Jan. 1946.
30. Roos, A.: *Amer. Heart Jour.*, Vol. 30, p. 238, Sept. 1945.
31. Petit, Donald W.: *Amer. Heart Jour.*, Vol. 29, p. 253, Feb. 1945.
32. Greene, James A., Bennett, A. W.: *Amer. Heart Jour.*, Vol. 30, p. 415, Oct. 1945.

30 East 40th Street.

**Read before the clinico-pathological conference of the Parkchester General Hospital, 1948.

THE USE OF THORIUM-X ALPHA RAY IN THE TREATMENT OF CUTANEOUS DISEASES

(A Preliminary Note)

N. E. Aronstam, M.D.
Detroit, Michigan

The employment of radioactive agents in skin disorders has been in use for some time. As early as 1932 an article of mine appeared in the *Urologic and Cutaneous Review* entitled "Uranium in the Treatment of Skin Diseases" in which 12 cases were reported. Since that time I have used the uranium salts in various skin lesions with fair success for close to ten years. In 1942 I published another contribution in the above mentioned journal, in which 88 more cases were reported. In 1943 my attention was called to the efficacy of Thorium-X Alpha Ray as a valuable agent of greater radioactivity than uranium. Unfortunately the literature on the subject was very meager; I had to rely upon my own judgment of its application, taking into consideration the severity of the cases, and their chronicity. The strength of the administration varied between 1000 and 2000 electrostatic units per 1.0, either in the form of an ointment, alcoholic solution, or a varnish. The types of dermatoses wherein this agent was resorted to consisted of vericose ulcers, erythemia perstans, parapsoriasis, lupus erythematosis, various forms of onychopathies, and in acquired pigmented seborrhoeic warts.

Whether this radioactive substance is applicable to many other skin disorders is still a matter of conjecture, but in the types mentioned above it formed a dependable therapeutic procedure. It is too early, therefore, to draw definite conclusions for its more extensive use in many other skin affections. Thus far I have had excellent results in selected cases. This form of treatment constitutes a new departure from the orthodox way of therapy. I am now tabulating all types of dermatoses wherein this radioactive agent has been used, and I am in the hope of soon furnishing a more elaborate and comprehensive discussion of the subject.

656 Maccabees Building.

SECONDARY NEPHRECTOMIES

James F. McCahey, M.D.
Philadelphia, Pa.

From the Department of Urology, Nazareth Hospital, Torresdale, Philadelphia, Pa.

Secondary nephrectomy may be a planned procedure or may be necessitated by the course of events following an operation upon the kidney, ureter or some adjacent organ.

The principal indication for planned secondary nephrectomy is pyonephrosis with constitutional symptoms of sepsis. In such cases a preliminary nephrostomy for drainage followed later by nephrectomy may be borne by the patient whereas a primary nephrectomy would be unavailing. While cases of this sort are not common yet it is evident that when they are encountered proper management is essential for a successful outcome.

One of the present series of cases belongs in the category of planned secondary nephrectomy.

The patient, a 48 year old white woman, was admitted on July 19, 1947. Two days previously she had left renal colic accompanied by chills and fever. Her past history revealed: scarlet fever and smallpox in childhood, three uncomplicated pregnancies and a single attack of left renal colic five years before admission. For two years prior to the present illness she had dyspnea on exertion and, for the past six months, ankle edema especially at the end of the day.

On examination the heart sounds were weak and distant although of regular rhythm; the rate was 80 per minute. Blood pressure varied from 100/50 to 110/70. No abdominal masses could be palpated but there was tenderness in the left costovertebral angle.

Roentgenograms of the chest showed considerable enlargement of the heart apparently from left ventricular hypertrophy and the aorta appeared thickened and slightly tortuous. Roentgenograms of the abdomen disclosed a shadow in the region of the mid-ureter on the left which suggested the presence of a left ureteral calculus.

The laboratory reports were: Urinalysis, reaction, acid; sp. gr., 1010; albumin, 2 plus; sugar, neg.;

erythrocytes, some; leucocytes, numerous free and clumped. Urine culture, E. coli. Blood studies: hemoglobin, 71 per cent; erythrocytes, 3,700,000; leucocytes, 20,300; urea nitrogen, 23 mg. per cent.

The temperature on admission was 101 F. Repeated blood cultures were negative.

In the evening of the second day of hospitalization the patient became anuric and the blood urea nitrogen later rose to 56 mg. per cent. The usual diuretic measures failed to re-establish renal function.

Cystoscopy was performed on the fourth day of hospitalization. A No. 6 catheter was passed up the left ureter but only a few drops of fluid were obtained. These were found to contain many leucocytes and a few erythrocytes; E. coli appeared on culture. A roentgenogram with the catheter in the left ureter showed the shadow noted in the plain film to be extra-ureteral.

A No. 8 catheter was passed up the right ureter and intermittent drainage became established within a few minutes and continued. Microscopic examination showed many red blood cells and an occasional white blood cell. The catheter was left in the right ureter for 48 hours. Urine continued to drain through the catheter and was also passed from the bladder. The bladder urine collected from passage down the right ureter alongside the catheter. On the day the catheter was removed the urinary output had risen to 2500 cc. and the blood urea nitrogen had dropped to 22 mg. per cent.

In the meantime the patient had an attack of cardiac decompensation, a severe chill followed by fever of 104 F. and a spell of auricular fibrillation.

On the seventh day of hospitalization cystoscopy showed on the right a 12 minute appearance of indigo-carmine with fair concentration. Thick purulent material was seen exuding from the left ureteral orifice.

The left kidney was then exposed and found to be enlarged, hydronephrotic and filled with pus. After the pus was evacuated a nephrostomy tube was placed within the kidney and the wound closed. The fever abated and the temperature became normal seven days later. The patient was temporarily discharged. A left nephrectomy was done on September 10th. Pathological examination showed chronic atrophic pyelonephritis. For the six days before her final discharge the blood pressure range had increased to 130/80 to 140/90.

A question of interest arises here with regard to the temporary dysfunction of the right kidney which precipitated the anuria since the left kidney was incapable of function. Was it due to sepsis or was it an example of the so-called reno-renal reflex? The sequence of events as described does not point to either of these as the responsible factor.

The fact that indwelling ureteral catheterization promptly re-established renal function strongly suggests that an obstruction was present. The site may well have been at the uretero-vesical junction. It has been demonstrated that this area may be obstructive even though there is no definite stricture. (3)

We know from the experimental work of Trueta and his associates that cessation of renal function may arise through shunting of the circulation away from the cortex to the medulla. (1, 4) It seems logical to assume that the right renal non-function here represents a response of this nature to uretero-vesical obstruction.

Another feature worthy of comment is the history of a single attack of left renal colic five years before the patient came to left nephrectomy. Urological studies were not carried out at the time of the original attack. It has been pointed out elsewhere that renal colic may be followed by painless renal nonfunction with its attendant dangers of insidious infection and that, therefore, management of cases of renal colic should not end with relief of pain but should include such measures as may be necessary to insure that renal function has not been interfered with. (2)

There were 53 other nephrectomies, five hemi-nephrectomies and one partial resection of a horseshoe kidney performed at Nazareth Hospital from its opening in 1941 to the end of September, 1948.

Among the conditions which necessitated the nephrectomies there were: 21 instances of pyelonephritis or pyonephrosis (stone was present in 11); seven instances of large hydronephrosis (calculi present in one and severe infection in two); two cases each of rupture, tuberculosis, carcinoma of the pelvis, nephrolithiasis and multiple cortical abscesses; one case each of lymphosarcoma, carcinoma of the ureter and various other conditions.

Of the five hemi-nephrectomies, three were for stone and two for hydronephrosis of the upper portion of a double kidney (one was infected and the other was painful).

The case of resection of part of one side of a horseshoe kidney will be summarized later.

In this series of 60 cases of partial or complete removal of a kidney there was one postoperative death.

The patient was a 61 year old white woman who was admitted on April 18, 1941. She had a low grade fever, pyuria and severe secondary anemia. Urine cultures were reported negative. Intravenous urography showed nonfunction of the right kidney. At cystoscopy it was not found possible to pass a catheter up the right ureter and therefore retrograde pyelography could not be carried out. Repeated whole blood transfusions were given prior to right nephrectomy which was done with little loss of blood under spinal anesthesia. Pathological examination showed pyonephrosis. Despite postoperative blood transfusions the patient expired four days later apparently from sepsis. Permission for autopsy could not be obtained.

This case record raises the question whether a preliminary nephrostomy would have been beneficial or whether the sepsis would have proved fatal in any event.

In the period from the opening of Nazareth Hospital in 1941 to the end of September, 1948, there were also 86 operations performed on the kidney or ureter as follows: 28 nephropexies, 17 ureterolithotomies, 11 pyelolithotomies one of which was on a double kidney and one on a horseshoe kidney, nine ligation of aberrant vessels, six

nephrostomies, three ureterostomies, three puncture of polycysts, two nephrolithotomies, one drainage of a peri-renal abscess and one dissection of a large ureterocele in a child. The renal area was explored five other times; once an inoperable cancer was found; twice the kidney was found to be absent and twice adhesions around the pelvis were freed.

One postoperative death occurred among this group. The patient was a 49 year old white woman who was admitted on November 23, 1943, complaining of bilateral loin pain, dysuria and fever. Plain roentgenograms of the abdomen showed large stag-horn calculi in both kidneys. The left kidney was functionless on intravenous urography but the right showed good excretory ability despite the large stone. The blood urea nitrogen was 23 mg. per cent.

Operation on the left disclosed a peri-nephritic abscess and such dense peri-renal adhesions that it was considered inadvisable to attempt nephrectomy. The patient improved generally and the fever abated. The right kidney was exposed on January 10, 1944. The large stag-horn calculus was removed through an incision extending along the pelvis up into the kidney. The patient was discharged free of symptoms.

She was not seen again for over two years when she returned in April, 1946, with anuria of three days duration. The right loin was tense. A hemostat was passed through the site of drainage area of the wound scar and pus and urine were evacuated. Roentgenography showed a calculus in the pelvis which was subsequently removed. Recovery was apparently progressing favorably when she developed parotitis which proved fatal.

This one postoperative death in 86 operations on the kidney or ureter with the one postoperative death in the 60 cases of complete or partial nephrectomy gives a postoperative mortality of 1.37 per cent in the two groups which indicates how safe operations are under conditions of modern technique.

In some of the cases of nephrectomy an operation on the kidney or an adjacent organ had been previously performed elsewhere. One such was a right nephrectomy for a functionless kidney in a 47 year old hypertensive female who had the right ureter severed in the course of a hysterectomy four years earlier. Another was a 26 year old man who had a left pyelotomy at the Philadelphia General Hospital in 1942 when the author was connected with that institution.

However, the cases of secondary nephrectomy here presented include only those which followed one of the 86 urological operations listed in this report. There were five such occurrences.

One patient, a 52 year old woman, required nephrectomy for pyelonephritis two years after pyelolithotomy. There had been no recurrence of stone and symptoms of pyelonephritis did not arise until shortly before the second admission. Nevertheless, urological check-up after the first operation may have prevented the second by disclosing correctable renal pathology.

Another case was that of a 34 year old woman with a small stone impacted in the upper ureter on the left. Unsuccessful ureterolithotomy resulted in a urinary sinus and a second operation disclosed such dense adhesions around the ureter and pelvis that nephrectomy was decided upon.

The other three cases followed ligation of anomalous vessels.

In one there was persistent fever after the first operation and exposure of the kidney showed a large infarct.

In another ligation of an aberrant vessel gave no relief of symptoms and nephrectomy was performed three months later. Pyelonephritis was found. In this case the nephrectomy probably should have been done originally.

The last was a 41 year old man admitted on June 10, 1948, with symptomless hematuria of three months' duration. Cystoscopy showed some enlargement of the prostate. Intravenous urography disclosed horseshoe kidney with bilateral hydronephrosis which was more advanced on the left and a shadow, probably that of a stone, was noted in the region of the left pelvis.

Through a left lumbar incision the isthmus of the fused kidney was divided and a branch of a large vein crossing the ureter was ligated and divided. However, a stone could not be located. Convalescence was satisfactory except for persistent urinary drainage which was suspected to be due to blockage from passage downward of the stone. Re-exposure of the left kidney was deemed advisable. The lower portion of the left side of the horseshoe kidney was found to be somewhat flabby and was resected. Pathological examination revealed a small abscess. A stone was not found. Convalescence was uneventful and urological studies show good bilateral function with marked reduction of the hydronephrosis despite the presence of the shadow suggestive of the possible presence of a stone.

While secondary nephrectomies of the nature just described indicate failure of a previous operation undertaken to preserve the kidney it does not follow that attempts at preservation of the kidney should not be diligently pursued despite occasional failures.

---

*Read before the Philadelphia Urological Society, October 25, 1948.

REFERENCES

1. Barclay, A. E., Daniel, P., Franklin, K. J., Prichard, M. M. L. and Trueta, J.: "Records and Findings Obtained during Studies of the Renal Circulation in the Rabbit with Special Reference to Vascular Short-circuiting and Functional Cortical Ischaemia." *J. Physiol.*, 105:27p., 1946.

2. McCahey, J. F.: "Renal Colic," *Penna. Med. J.*, 48: 937, 1945.

3. McCahey, J. F. and Fetter, J. S.: "Non-fibrous Vesicoureteral Obstruction." *J. Vrol.*, 52:216, 1944.

4. Trueta, J.: "Renal Anoxia." *Lancet*, 2:415, 1945.

1534 Pine Street.

EDITORIAL

The cause or causes of rheumatic fever have been discussed in and out of medical literature for generations. Age, climate, sex, influence of the endocrines, "family taint," predisposition—all these and many more have been set down as contributing causes, but, in spite of much evidence to the contrary, the most probable cause; viz, some form of Streptococcus has not as yet been generally admitted. The Fifteenth Edition of Osler, edited by Christian, 1944, pp. 98 et seq., states that the view is gaining ground as to hypersensitivity of the body to Strep. hemolyticus. The notation is made that Streptococcal organisms are often found in tonsils, sinuses or elsewhere in the respiratory tract (bronchi, etc.). ". . . for the present the streptococcal etiology on an allergic basis seems to have most observations in its favor."

For years ENT specialists have seen "strep. throats" (the diagnosis was not always made from laboratory studies) which seemingly have cleared up, to be followed by an acute rheumatic fever with the common concurrent complications on the heart valves. Possibly the reason that a streptococcic cause for rheumatic fever with the portal of entry in the respiratory tract has not been accepted is a partial failure to satisfy the postulates set up by Paul Ehrlich. However, we are coming to understand infection and immunity much better these da s and to comprehend sensitivity, so-called allergy and the vaso-motor states with a greater degree of certainty; hence we shall soon be able to determine etiology with much greater exactitude.

Reuling and Cramer in a recent "paper" (*J. A. M. A.*, June 26, 1948) report two cases of subacute bacterial endocarditis seemingly cured by penicillin, and they observe that until quite recently subacute bacterial endocarditis was considered incurable. Now, with further experience "over 90 per cent of patients recover . . . when sufficient penicillin is used." Previously, numerous writers have declared it to be ineffectual.

These authors report a 36-year-old Negro with a history of r. fever at 14 with recurrent pains in joints and muscles at intervals up to the present. Apparently no history of "sore throat" was obtained. In hospital, salicylates were given in full dosage, but the temperature remained high. Blood culture revealed S. viridans, 400 bacteria to the cc. Penicillin was begun, but in 1944 only an insufficient quantity was obtainable. Sulfadiazine had been used but was discontinued nine days before penicillin was started, and while the temperature had come down to normal and remained so, blood cultures were still positive for S. viridans. By contrast, penicillin was first given on the 37th hospital day (200,000 units daily for 13 days). The temperature became normal at once, and 18 blood cultures over a 33-day period were negative. However, there was a *recidive* seven weeks after penicillin had been discontinued, with blood culture positive for S. viridans again. Therefore, another series was given, with negative blood. About three months later came a second recurrence with a third course of 16,000 units every two hours, continued for 39 days. The blood cultures became sterile immediately and have remained so for three years! Apparently, a focus of infection remained somewhere in the body (heart valves?) not easily reached by the drug because of the entrenchment of the S. viridans, but for three subsequent years blood cultures have remained sterile.

The second case, a 53-year-old white man experienced a severe sinusitis with fever, pains in the back and legs, and a systolic murmur at the apex. Fifty thousand units of penicillin were given every three hours for two days, followed by 30,000 units every three hours for five days. After seven days the man was sent home—temperature normal. Two days later a recurrence, then re-admission. Three blood cultures showed S. viridans. Sensitivity to penicillin was .08 unit per cc. There were pains in fingers and toes. Penicillin was given at two to three hour intervals intramuscularly for 37 days, 500,000 units every 24 hours. We assume that recovery was complete, although the report does not so state. It would seem that, owing to difficulty in procurement, an insufficient amount of penicillin was used. Many clinicians now give a dose of 300,000 units every three hours. This seems to be the rule. Penicillin must be continued for at least a week to ten days after all symptoms have disappeared and after several blood cultures are negative. L. Loewe treated five patients with forty million units (40,000,000) per day with three recoveries. As for "penicillin fastness," it does occur, but resistance to penicillin is not widespread. In the beginning and even later, we were too cautious and did not use enough penicillin to overwhelm the contesting organisms. This allowed them time to build up protection against our drug. From a half to a million units in 24 hours seems about right in the acute severe infections by any of the Streptococcus family.

Massell, Dow and Jones of Boston have made some experimental studies as to the efficacy of orally administered penicillin. They outline four objectives (*J. A. M. A.*, Dec. 4, 1948, p. 1030): 1.) To find out whether penicillin administered orally or intramuscularly could reduce the incidence of S. hemolyticus in ward patients—so-called "carriers"; 2.) to determine whether reduction of carrier rate under penicillin would reduce the spread of infection in the wards; 3.) whether S. hemolyticus could be "eradicated" from all patients' throats by using infrequent doses of penicillin given orally. This was a question of prophylaxis. 4.) to determine whether such treatment with penicillin would influence immunity to streptococci and prevent recurrences of r. fever. Methods of procedure, tables, protocols, etc., need not concern us here, but the "summary" given by the authors is revealing. Penicillin given by mouth as 300,000 to 1,000,000 units per day for 10 days "suppressed" S. hemolyticus in the throats of all but 2.1 per cent of patients with r. fever, and "completely eradicated the organisms in 77.7 per cent." However, the carriers were not greatly affected and "penicillin did not completely

MEDICAL RECORD

A National Review of Medicine and Surgery, Established 1843

FORMERLY KNOWN AS THE MEDICAL JOURNAL AND RECORD

PUBLISHED MONTHLY BY

FOX-SHULMAN PUBLICATIONS

Editorial and Executive Offices: N. E. Corner 16th & Conlyn Sts. Philadelphia 41, Pa.

Office of Publication: 5800 North Marvine St. Philadelphia, Pennsylvania.

Publisher
LEONARD MARTIN FOX

Editor
SOL SHULMAN

Managing Editor
MURIEL FRIED

EDITORIAL BOARD

Dermatology
DR. HERMAN GOODMAN
New York, N. Y.

Microbiology, Pathology
DR. M. GERUNDO
Lubbock, Texas

Diagnosis
DR. JOSEPH H. ISENSTEAD
Canajoharie, N. Y.

Neuropsychiatry
DR. EDWARD PODOLSKY
Brooklyn, N. Y.

Otorhinolaryngology
DR. IRVING W. VOORHEES
New York, N. Y.

Otolaryngology
DR. ABRAM H. PERSKY
Philadelphia, Pa.

Gastroenterology
DR. W. B. JAFFE
Detroit, Mich.

Pediatrics
DR. I. NEWTON KUGELMASS
New York, N. Y.

History of Medicine
DR. SOLOMON R. KAGAN
Roxbury, Mass.

Psychosomatic Medicine
DR. A. D. JONAS
New York, N. Y.

Mental Hygiene
DR. B. LIBER
New York, N. Y.

Radiology
DR. IRA KAPLAN
New York, N. Y.

Metabolism
DR. ANTHONY SINDONI, JR.
Philadelphia, Pa.

Urology
DR. JAMES F. MCCAHEY
Philadelphia, Pa.

Subscription Price: Under Domestic Postage, $5 Yearly; Under Foreign Postage, $6 Yearly; Single Copies, 50 cents.

Remittance should be made by New York Exchange, post office, or express money order, payable to Fox-Shulman Publications or by registered mail, as the publishers are not responsible for money sent by unregistered mail. Remittances from Foreign Countries should be made with International Money Orders.

MANUSCRIPTS

Illustrations: Photographs should be numbered and bear on the back author's name and title of article; top of the picture should be indicated. Glossy prints produce the best half-tones. Drawings and charts for reproduction should be made in black ink.

Bibliographies should follow the style of the Quarterly Cumulative Index Medicus of the American Medical Association, and should give name of author, title of article, name of periodical, with volume, page, month, day of month if weekly, and year.

Manuscripts should carry addresses of authors and should not be rolled. Reprints are furnished. Prices can be secured after article is in type.

All material published in the MEDICAL RECORD is copyrighted and should not be reproduced without our permission.

All material for publication should be sent to THE EDITOR of the MEDICAL RECORD, N. E. Corner 16th & Conlyn Sts., Philadelphia 41, Pa.

Exclusive publication: Original articles are accepted with the understanding that they are contributed only to the MEDICAL RECORD.

Preparation: Material must be typewritten and double spaced. Carbon copies or single spaced manuscripts will not be considered.

Changes other than the correction of errors will not be permitted after the article has been set in type, so be sure and write your paper the way you want it printed.

prevent the spread of streptococcus infections among ward patients." It is thought that a dosage of 100,000 to 200,000 units of penicillin t.i.d. might prevent hemolyticus streptococcus from multiplying and so afford some prophylaxid against r. fever.

In the discussion, Spink of Minneapolis stated that Hamburger and associates have shown that the most dangerous carriers are persons who have a *positive nasal culture* of S. hemolyticus, with the Lancefield group A as the major offender. Once the germs have invaded the submucosa and entrenched themselves there, neither the sulfas nor penicillin will prevent r. fever. He said that "penicillin should replace the routine use of sulfonamide compounds." Dr. Massell clarified the questions raised by declaring that penicillin should be continued for five to ten days after a seeming cure, and that nasal cultures are very important in locating the enemy. Throat cultures are not enough. Visitors may bring in new strains of bacteria to r. fever patients. Penicillin administered for weeks or months may become ineffectual, then carriers become foci of infection for others, even though not showing symptoms of their own. Dr. Ann Kuttner was quoted as establishing the fact that penicillin-resistant streptococci which invade the blood stream may attach to a heart valve, become entrenched and not amenable to further penicillin therapy. Allergic reactions to penicillin must not be confused with evidences of r. fever. The guiding point is urticaria which is not a sign in r. fever, but is often seen after penicillin.

From our reading and study of the experiences of others as well as of our own, one may say that some form of Streptococcus may be found in the nose, throat or bronchi, and that these may be the portal of entry for invasion of the blood stream leading to rheumatic fever with all of the cardiac and other complications so well recognized, but not always so well understood.

The staff of MEDICAL RECORD sincerely regrets the recent death of Dr. Abraham O. Wilensky of 12 East 87th Street, New York 28, New York. The doctor passed away suddenly on February 4.

A specialist in general surgery and cancer, Dr. Wilensky was a member of the Editorial Board of this journal.

Dr. Wilensky was graduated from Columbia University College of Physicians and Surgeons, New York, in 1907. He was a member of the American Medical Association, a Fellow of the American College of Surgeons, a member of the American Association of Thoracic Surgery, and a consultant in several hospitals in general and abdominal surgery.

Radioactive Gold to be Used in Treatment of Levicemia

Radioactive gold has armed the medical profession with a new potent weapon for the treatment of leukemia and several other forms of cancer, Dr. Paul F. Hahn, director of the Cancer Research Laboratories, Meharry Medical College, has announced.

Dr. Hahn emphasized that gold does not offer promise of a cure but said that it does represent a very satisfactory means of obtaining remissions in cases of leukemia, a malady characterized by destruction of red corpuscles; Hodgkin's disease, which produces enlargement of lymphoid tissue, spleen, liver and sometimes kidneys; and lymphomas, which are lymphoid tissue tumors.

The gold, which is non-toxic and relatively inexpensive, can be administered by physicians to ambulatory patients at home. This saves the hospitalization required for X-ray treatment, in which only limited amounts can be given daily to avert injury to the skin.

Radioactive gold is produced easily and economically in the uranium pile and its cost has been estimated by the Atomic Energy Commission recently at only 13 cents a millicurie, or unit of radioactivity.

Patient acceptance is a highly important factor in the successful administration of protein supplements. DPS Formula 201 is not only therapeutically effective but also easy to administer and pleasant to take.

The crisp, crunchy, golden brown granules of DPS Formula 201 are rich in all the amino acids, contain large amounts of the Vitamin B Complex factors, and include the peptide-like factor, Strepogenin. Having a savory "meaty" flavor, DPS Formula 201 is pleasant to take. Your patients can blend it with vegetable juices such as tomato or carrot juice. Add it to plain or chocolate-flavored milk. Mix it in gravies or meat sauces. Prepare it with hot water as a bouillon. Every one of these easy-to-prepare methods will provide a palate-pleasing protein supplement acceptable to your patients. Available in 7 oz. **glass** containers. Write today for free taste-sample.

specify dartell dps formula 201

DARTELL LABORATORIES

1226 South Flower Street • Los Angeles 15, Calif.

in whooping cough

ELIXIR BROMAURATE

IS A UNIQUE REMEDY OF UNIQUE MERIT

Cuts short the period of illness and relieves the distressing spasmodic cough. Also valuable in Bronchitis and Bronchial Asthma.

In 4 oz. original bottles. A teaspoonful every 3 to 4 hrs.

Prescription by Thousand of Doctors

GOLD PHARMACAL CO. NEW YORK CITY

. . . to relieve the strain of

CHRONIC IRREGULARITY

WHEN aberrations of the menses suggest that normal function has overstepped the bounds of physiologic limits—the physician is often confronted with a condition which proves highly distressing to the patient. For such cases (as in amenorrhea, dysmenorrhea, menorrhagia and metrorrhagia), many physicians rely on Ergoapiol (Smith) with Savin as the product of choice. By its unique inclusion of all the alkaloids of ergot (prepared by hydro-alcoholic extraction), and the presence of apiol and oil of savin—Ergoapiol (Smith) with Savin provides a balanced and sustained tonic action on the uterus, affording welcome relief in many functional catamenial disturbances. It produces a desirable hyperemia of the pelvic organs, stimulates smooth, rhythmic uterine contractions, and also serves as an efficient hemostatic and oxytocic agent. General dosage: 1 to 2 capsules 3 to 4 times daily.

Write for your copy of the new 20-page brochure "Menstrual Disorders—Their Significance and Symptomatic Treatment"

Supplied only in ethical packages of 20 capsules.

ERGOAPIOL (Smith) *with* SAVIN

MARTIN H. SMITH COMPANY • 150 LAFAYETTE STREET, NEW YORK 13, N. Y.

MHS

Ethical protective mark, "MHS" visible when capsule is cut in half at seam.

NO HABIT FORMATION . . .

NO BLOOD STREAM DAMAGE . . .

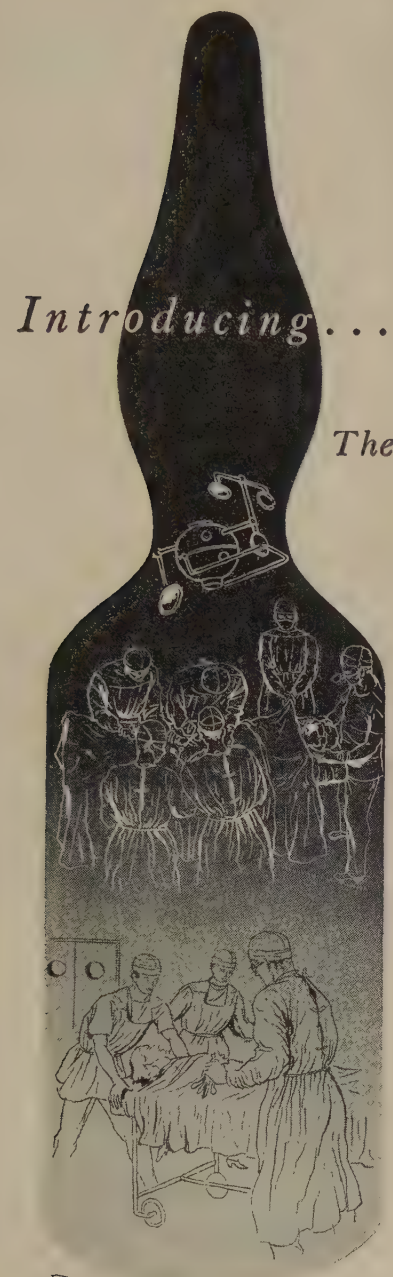
When you use

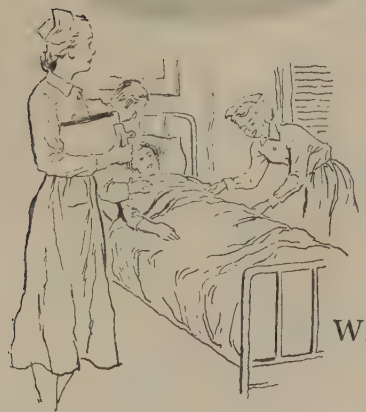
PASADYNE

you need not have any fears of habit formation, depression or blood stream damage.

It is therapeutically reliable, does not disturb the gastric function, depress the circulatory system or habituate the patient to its use.

John B. DANIEL, INC. ATLANTA, GA.





*Introducing.....Stigminene**

Bromide 'Warner'

The Newest Cholinergic Compound

Superior effects

Smooth balanced action

Minimum by-effects

WILLIAM R. WARNER & CO., INC. is proud to present STIGMINENE* BROMIDE 'Warner', an effective cholinergic compound of low toxicity, wide margin of therapeutic safety, and prolonged action.

STIGMINENE* BROMIDE 'Warner' is indicated in the prevention and treatment of postoperative abdominal distention and urinary retention. It may be used for all degrees of intestinal and urinary bladder atony — from gastro-intestinal atony developing in chronic illness, certain acute infections or toxemias, and following anesthesia; meteorism complicating pneumonia; to as severe an involvement as paralytic ileus.

STIGMINENE* BROMIDE 'Warner' is supplied in 1-cc ampuls of a 1:2000 solution, 0.5 mg. each; cartons of 12 and 50 ampuls.

*Trade Mark

WILLIAM R. WARNER & CO., INC.

New York St. Louis

CURRENT MEDICAL INDEX

ALLERGY

Allergic Diseases and the Nose . . . *Medical Journal Australia* . . . October 30, 1948

Advantages of Early Recognition and Treatment of Allergic Disorders in Infancy and Childhood . . . *New Orleans Medical and Surgical Journal* . . . December, 1948

Allergic Factors in Gout . . . *Journal of A.M.A.* . . . January 8, 1949

Asthma Due to Bacterial Allergy: Indentified by Tissue Culture and Treated by Desensitization . . . *Ohio State Medical Journal* . . . January, 1949

Allergy Problems . . . *Journal of Missouri State Medical Association* . . . February, 1949

ANESTHESIOLOGY

Anesthesia in Otorhinolaryngology . . . *Hahnemannian Monthly* . . . December, 1948

Spinal Anesthesia in Vaginal Deliveries . . . *Rhode Island Medical Journal* . . . December, 1948

E. H. Embley Memorial Lecture—Anesthesia and the Role of the Anesthetist in the Surgery of the Thyroid Gland . . . *Medical Journal of Australia* . . . November 13, 1948

ARTHRITIS

Relation of Ascorbic Acid to Chronic Arthritis . . . *Illinois Medical Journal* . . . January, 1949

CANCER

Diagnosis and Management of Fundal Carcinoma . . . *Southern Medical Journal* . . . January, 1949

Delay in Treatment of Cancer . . . *Illinois Medical Journal* . . . December, 1948

Diagnosis of Early Uterine Cancer . . . *Journal of Michigan State Medical Society* . . . December, 1948

A Case Report of Metastatic Carcinoma Treated with Teropterin . . . *Annals of Internal Medicine* . . . December, 1948

Some Favorable Results in the Radical Surgical Attack Upon So-called Inoperable Abdominal Cancer . . . *Southern Medicine and Surgery* . . . December, 1948

New Developments in Irradiation Therapy of Cancer of the Uterine Cervix . . . *Texas State Journal of Medicine* . . . December, 1948

Prognostic Significance of the Vaginal Smear After Irradiation of Uterine Carcinoma . . . *Texas State Journal of Medicine* . . . December, 1948

New Developments in Treatment of Cancer . . . *Ohio State Medical Journal* . . . January, 1949

Clinical Aspects of Occupational Cancer . . . *Current Medical Digest* . . . January, 1949

Hyperleukocytosis Occurring in Carcinoma of the Bladder *New York State Journal of Medicine* . . . January 15, 1949

Cancer in General Practice . . . *Virginia Medical Monthly* . . . January, 1949

The Papanicolaou Method of Cancer Diagnosis . . . *Minnesota Medicine* . . . January, 1949

Experience with Screening Tests in the Detection of Cancer . . . *Minnesota Medicine* . . . January, 1949

Cancer in Minnesota Children . . . *Minnesota Medicine* . . . January, 1949

The Cancer Problem from the Standpoint of the Practicing Physician in the Small Community . . . *Minnesota Medicine* . . . January, 1949

Cancer of Uterus . . . *Rhode Island Medical Journal* . . . January, 1949

Cancer Detection Clinic . . . *Rhode Island Medical Journal* . . . January, 1949

Rhode Island State Department of Health Cancer Control Program . . . *Rhode Island Medical Journal* . . . January, 1949

CARDIOLOGY

Aortic Coarctation with Patent Ductus Arteriosus . . . *British Medical Journal* . . . December 18, 1948

The Effect of Subacute Bacterial Endocarditis on the Course of the Underlying Heart Disease . . . *New England Journal of Medicine* . . . December 16, 1948

Pericarditis . . . *Southern Medical Journal* . . . January, 1949

The Heart in Sickle Cell Anemia . . . *Southern Medical Journal* . . . January, 1949

Rheumatic Fever and the School Child . . . *Journal of Michigan State Medical Society* . . . December, 1948

Diagnostic Aids in Rheumatic Fever . . . *Journal of Michigan State Medical Society* . . . December, 1948

Report of the Committee for the Evaluation of Anticoagulants in the Treatment of Coronary Thrombosis with Myocardial Infarction . . . *Journal of Michigan State Medical Society* . . . December, 1948

Medical Diagnosis of Congenital Anomalous Heart . . . *Journal of Michigan State Medical Society* . . . December, 1948

Primary Sarcoma of the Heart . . . *Annals of Internal Medicine* . . . December, 1948

Surgical Aspect of Congenital Heart Disease . . . *Southern Medicine and Surgery* . . . December, 1948

Mechanism of Congestive Failure . . . *Journal of Medical Society of New Jersey* . . . January, 1949

Current Therapeutic Procedures in Coronary Disease . . . *Rocky Mountain Medical Journal* . . . January, 1949

Heart Disease . . . *Northwest Medicine* . . . January, 1949

Our Changing Viewpoint about Congestive Failure . . . *Annals of Internal Medicine* . . . January, 1949

Pulmonary Arterial Hypertension in Congenital Heart Disease . . . *Bulletin of Johns Hopkins Hospital* . . . January, 1949

Recent Advances of Surgical Treatment of Congenital Lesions of Heart and Great Vessels . . . *Illinois Medical Journal* . . . January, 1949

Coronary Disease in Women . . . *New York State Journal of Medicine* . . . February 1, 1949

Coronary Heart Disease . . . *Journal of Missouri State Medical Association* . . . February, 1949

DERMATOLOGY

Vitamin D in Boeck's Sarcoidosis . . . *British Medical Journal* . . . December 18, 1948

Ringworm of the Scalp, Its Epidemiological Control . . . *New York Medicine* . . . November 20, 1948

Experimental Studies of Healing Agents for Human Skin . . . *Hahnemannian Monthly* . . . December, 1948

Generalized Bullous Eruption Following Testing for Sulfonamide Hypersensitivity . . . *New England Journal of Medicine* . . . December 16, 1948

Modern Conceptions Concerning the Compulsory Isolation of Lepers. Contagious Malignant Morbus Hansen *versus* Noncontagious Benign Hansenide . . . *Royal Society of Medicine* . . . November, 1948

Schamberg's Disease . . . *Royal Society of Medicine* . . . November, 1948

Parapsoriasis en Plaques Treated with Calciferol . . . *Royal Society of Medicine* . . . November, 1948

Parapsoriasis en Plaques—Treated with Vitamin D . . . *Royal Society of Medicine* . . . November, 1948

Multiple Atrophic Lesions: Case for Diagnosis . . . *Royal Society of Medicine* . . . November, 1948

Fox-Fordyce Disease in a Young Girl . . . *Royal Society of Medicine* . . . November, 1948

Necrobiosis Lipoidica Diabeticorum Following Pyoderma . . . *Royal Society of Medicine* . . . November, 1948

Sarcoidosis Following Injury . . . *Royal Society of Medicine* . . . November, 1948

Incontinentia Pigmenti (Bloch Sulzberger) . . . *Royal Society of Medicine* . . . November, 1948

Precocity in a Girl Aged 5: Due to Stilboestrol Inunction *Royal Society of Medicine* . . . November, 1948

Epidermolysis Bullosa, Two Cases . . . *Royal Society of Medicine* . . . November, 1948

Tropical Lichenoid Dermatitis . . . *Royal Society of Medicine* . . . November, 1948

Pretibial Myxomatous Degeneration . . . *Royal Society of Medicine* . . . November, 1948

Epidermolysis Bullosa Dystrophica . . . *Royal Society of Medicine* . . . November, 1948

Hyperkeratosis Follicularis et Parafollicularis in Cutem Penetrans . . . *Royal Society of Medicine* . . . November, 1948

The Successful Treatment of Gold Dermatitis with British Anti-Lewisite: A Case Report . . . *Virginia Medical Monthly* . . . January, 1949

Newer Developments in Allergic Eczematous Dermatitis . . . *Medical Annals of D. C.* . . . January, 1949

Problem of Lupus Erythematosus . . . *California Medicine* . . . January, 1949

Carcinoma of Skin . . . *Rocky Mountain Medical Journal* . . . January, 1949

DISEASE

The Control of Tropical Diseases in the Western Hemisphere . . . *Medical Woman's Journal* . . . December, 1948

Kala-Azar . . . *American Journal of Medical Sciences* . . . January, 1949

ENDOCRINOLOGY

Management of Hyperthyroidism . . . *Texas State Journal of Medicine* . . . January, 1949

Present Status of Antithyroid Therapy . . . *Journal of Michigan State Medical Society* . . . January, 1949

Contribution to the Homeopathic Treatment of Goiter . . . *Journal of American Institute of Homeopathy* . . . February, 1949

EPILEPSY

Porencephaly in Institutional Epileptics . . . *Journal of Nervous and Mental Disease* . . . December, 1948

Methyl Hydantoin in Treatment of Epilepsy . . . *Journal of Nervous and Mental Disease* . . . December, 1948

GASTROENTEROLOGY

The Diagnosis of Lesions of the Stomach . . . *Southern Medical Journal* . . . January, 1949

A Comparative Study of the Inhibitory Action of Chemical Agents on Peptic Activity . . . *American Journal of Digestive Diseases* . . . January, 1949

The Present Management of Peptic Ulcer . . . *Illinois Medical Journal* . . . December, 1948

Roentgen Ray Aspects of Malignancies of the Small Intestines . . . *Illinois Medical Journal* . . . December, 1948

Toothpick in Ascending Colon, Case Report . . . *Illinois Medical Journal* . . . December, 1948

Large Pancreatic Cyst . . . *Journal of Michigan State Medical Society* . . . December, 1948

The Differential Diagnosis in Gastric Ulcer . . . *Review of Gastroenterology* . . . January, 1949

The Treatment of Gastric, Duodenal or Jejunal Peptic Ulcer . . . *Review of Gastroenterology* . . . January, 1949

Treatment of Gastroduodenal Peptic Ulcers with Protein Hydrolysate and a Nonreactive Aluminum Hydroxide Preparation . . . *Review of Gastroenterology* . . . January, 1949

Surgical Therapy in Gastroduodenal Ulcer . . . *Review of Gastroenterology* . . . January, 1949

An Anion Exchange Resin for the Medical Management of Peptic Ulcer . . . *Review of Gastroenterology* . . . January, 1949

Diagnosis of Gastric Neoplasms . . . *Journal of A.M.A.* . . . January 8, 1949

Gastroscopic Appearances Following Vagotomy . . . *Journal of A.M.A.* . . . January 15, 1949

Control of Gastric Secretion . . . *British Medical Journal* . . . December 25, 1948

Partial Gastroectomy for Peptic Ulcer . . . *British Medical Journal* . . . December 25, 1948

Benign Nonspecific Neoplasms of the Gastrointestinal Tract . . . *Virginia Medical Monthly* . . . January, 1949

Argentaffinoma of Gastrointestinal Tract . . . *British Journal of Surgery* . . . October, 1948

Neurogenic Tumors of Stomach . . . *British Journal of Surgery* . . . October, 1948

Duodenocolic Fistula Complicating Carcinoma Coli . . . *British Journal of Surgery* . . . October, 1948

Idiopathic Ulcerative Colitis . . . *Journal of A.M.A.* . . . January 22, 1949

Cholecystopathies from Anomalies of Gall Bladder and Its Ducts . . . *Texas State Journal of Medicine* . . . January, 1949

Preoperative Liver Function . . . *Texas State Journal of Medicine* . . . January, 1949

Treatment of Biliary Obstruction . . . *Texas State Journal of Medicine* . . . January, 1949

Surgical Gall Bladder . . . *Journal of Medical Society of New Jersey* . . . January, 1949

Rapid Healing of Peptic Ulcers in Patients Receiving Fresh Cabbage Juice . . . *California Medicine* . . . January, 1949

Achlorhydria and Peptic Ulcer . . . *Annals of Internal Medicine* . . . January, 1949

Value of Indicated Remedy in Gastrointestinal Practice . . . *Journal of American Institute of Homeopathy* . . . February, 1949

GENERAL ARTICLES

Uses of Atomic Energy in Medicine . . . *Hahnemannian Monthly* . . . December, 1948

Care of the Chronically Ill . . . *Ohio State Medical Journal* . . . December, 1948

Keeping up with Medicine . . . *Ohio State Medical Journal* . . . December, 1948

Physical Medicine and Preventive Medicine . . . *Southern Medical Journal* . . . January, 1949

What Good Are Health Museums . . . *Rhode Island Medical Journal* . . . December, 1948

Problems of the General Practitioner in Rural Areas . . . *Journal of Michigan State Medical Society* . . . December, 1948

Moral Problems in the Practice of Medicine . . . *New England Journal of Medicine* . . . December 23, 1948

The Medical Examiner and the Practicing Physician . . . *New England Journal of Medicine* . . . December 23, 1948

Medicine Men and Doctors . . . *Texas State Journal of Medicine* . . . December, 1948

Treatment of the Fat and Lean . . . *Journal of A.M.A.* . . . January 8, 1949

Nazi War Crimes of a Medical Nature . . . *Journal of A.M.A.* . . . January 15, 1949

Medical Care in the Nation in Another War . . . *Journal of A.M.A.* . . . January 15, 1949

Physicians in an Atomic War . . . *Journal of A.M.A.* . . . January 15, 1949

Hospital and Health-Center Facilities in Massachusetts . . . *New England Journal of Medicine* . . . December 30, 1948

Keeping Up with Medicine . . . *Ohio State Medical Journal* . . . January, 1949

The Historian's Notebook. The First Physician's Telephones and the First Telephone Secretary in Columbus, 1879 . . . *Ohio State Medical Journal* . . . January, 1949

Trends in Medical Education . . . *Medical Annals of D. C.* . . . January, 1949

Joseph Goldberger and Mysterious Hunger . . . *Medical Annals of D. C.* . . . January, 1949

Combat the Menace of Socialized Medicine . . . *Northwest Medicine* . . . January, 1949

What Is the Future of Prepaid Medicine . . . *Northwest Medicine* . . . January, 1949

Preanesthetic Medication . . . *Journal of Michigan State Medical Society* . . . January, 1949

Project for Michigan Foundation for Medical and Health Education . . . *Journal of Michigan State Medical Society* . . . January, 1949

Practicing Physician and Preventive Medicine . . . *Journal of Michigan State Medical Society* . January, 1949

GENITOURINARY

Arsenical Encephalopathy . . . *British Medical Journal* . . . December 18, 1948

Fertility Studies in the Human Male with Traumatic Injuries of the Spinal Cord and Cauda Equina . . . *New England Journal of Medicine* . . . December 16, 1948

Modified Technique in Suprapubic Prostatectomy . . . *Urologic and Cutaneous Review* . . . January, 1949

Perineal Prostatectomy Today . . . *Journal of A.M.A.* . . . January 15, 1949

Transurethral Prostatectomy . . . *Journal of A.M.A.* . . . January 15, 1949

Clinical Applications of the Male Sex Hormone . . . *Clinical Medicine* . . . December, 1948

Bilharzial Ureter . . . *British Journal of Surgery* . . . October, 1948

Implantation of Secondaries from Renal Carcinoma within Ureteric Lumen . . . *British Journal of Surgery* . . . October, 1948

Megalo-Ureter . . . *British Journal of Surgery* . . . October, 1948

Fistula between Rectum and Urinary Tract . . . *British Journal of Surgery* . . . October, 1948

Accessory Urethral Canal in Male . . . *British Journal of Surgery* . . . October, 1948

Jarisch-Herxheimer Phenomenon . . . *Journal of A.M.A.* . . . January 22, 1949

Decrease in Attack Rate of Syphilis . . . *Journal of Medical Society of New Jersey* . . . January, 1949

HEMATOLOGY

Immunochemical Studies on Blood Groups . . . *Journal of Experimental Medicine* . . . January 1, 1949

Hypertension as a Reaction Pattern to Stress; Summary of Experimental Data on Variations in Blood Pressure and Renal Blood Flow . . . *Annals of Internal Medicine* . . . December, 1948

Lipemia in Hemochromatosis . . . *New England Journal of Medicine* . . . December 23, 1948

Diet in Diabetes Mellitus . . . *Texas State Journal of Medicine* . . . January, 1949

Pathology of Transfusion Reactions . . . *New Orleans Medical and Surgical Journal* . . . January, 1949

Causes and Prevention of Transfusion Reactions . . . *New Orleans Medical and Surgical Journal* . . . January, 1949

Anticoagulants in Treatment of Postpartum Venous Thrombosis and Embolism . . . *New Orleans Medical and Surgical Journal* . . . January, 1949

Hemostasis with Absorbable Material in Operation on the Foot . . . *California Medicine* . . . January, 1949

Use of Anticoagulants in Treatment of Diseases of Heart and Blood Vessels . . . *Annals of Internal Medicine* . . . January, 1949

Osmotic Resistance of Human Erythrocytes in Normal, Carrier and Anemic States . . . *American Journal of Medical Sciences* . . . January, 1949

Studies on Proteolytic Enzyme in Human Plasma . . . *Bulletin of Johns Hopkins Hospital* . . . January, 1949

Subungual Hemorrhages and Hyperkeratoses . . . *Bulletin of Johns Hopkins Hospital* . . . January, 1949

Penicillin in Treatment of Early Syhpilis Complicating Hemophilia . . . *Bulletin of Johns Hopkins Hospital* . . . January, 1949

HEPATOLOGY

Hemostatis in Partial Resection of the Liver: Case Report . . . *Southern Medical Journal* . . . January, 1949

Preoperative Liver Function . . . *Texas State Journal of Medicine* . . . January, 1949

Treatment of Biliary Obstruction . . . *Texas State Journal of Medicine* . . . January, 1949

Xanthomatous Biliary Cirrhosis . . . *Annals of Internal Medicine* . . . January, 1949

Easy Exposure for Biliary Surgery . . . *Clinical Medicine* . . . January, 1949

INFLUENZA

Purification of an Influenza Virus Substrate, and Demonstration of Its Competitive Antagonism to Apple Pectin . . . *Journal of Experimental Medicine* . . . January 1, 1949

Effect of the Lesion Due to Influenza Virus on the Resistance of Mice to Inhaled Pneumococci . . . *Journal of Experimental Medicine* . . . January 1, 1949

NEUROLOGY

Joint Meeting with the Societe de Neurologie de Paris at La Salpetriere, Paris . . . *Royal Society of Medicine* . . . November, 1948

Discussion on Cerebral Vascular Disease in the Young . . . *Royal Society of Medicine* . . . November, 1948

Discussion on Intracranial Hypotension . . . *Royal Society of Medicine* . . . November, 1948

Quarternary Ammonium Ions and Sodium Ions in Nerve Physiology . . . *Bulletin of Johns Hopkins Hospital* . . . December, 1948

The Effect of Anticholinesterases and Related Substances on Nervous Activity in the Cockroach . . . *Bulletin of Johns Hopkins Hospital* . . . December, 1948

Open Pages in Neurology . . . *Pennsylvania Medical Journal* . . . December, 1948

Early Neurosyphilis . . . *New England Journal of Medicine* . . . December 30, 1948

Recent Advances in Research and Treatment of Multiple Sclerosis . . . *Ohio State Medical Journal* . . . January, 1949

Recent Advances from a Study of Multiple Sclerosis . . . *Ohio State Medical Journal* . . . January, 1949

Personal Observation on the Treatment of Multiple Sclerosis . . . *Ohio State Medical Journal* . . . January, 1949

BAL (2, 3-Dimercaptopropanol) in Arsenical Optic Neuritis . . . *New York State Journal of Medicine* . . . January 15, 1949

Aldarsone and Bismuth Combined in Treatment of Neurosyphilis . . . *Journal of Nervous and Mental Disease* . . . December, 1948

Atypical Clinical Features of Acoustic Nerve Tumors . . . *Journal of Nervous and Mental Disease* . . . December, 1948

OBSTETRICS AND GYNECOLOGY

Gynecology in the Elderly Patient . . . *Ohio State Medical Journal* . . . December, 1948

Spinal Anesthesia in Vaginal Deliveries . . . *Rhode Island Medical Journal* . . . December, 1948

A Case of Erythroblastotis Fetalis Associated with Congenital Malformations, Placental Changes and Renal Disease in the Mother . . . *Urologic and Cutaneous Review* . . . January, 1949

Diagnosis of Early Uterine Cancer . . . *Journal of Michigan State Medical Society* . . . December, 1948

The Climacteric and Its Management . . . *Journal of Michigan State Medical Society* . . . December, 1948

Some Practical Considerations About Endometriosis . . . *Journal of Michigan State Medical Society* . . . December, 1948

New Developments in Irradiation Therapy of Cancer of the Uterine Cervix . . . *Texas State Journal of Medicine* . . . December, 1948

Prognostic Significance of the Vaginal Smear After Irradiation of Uterine Carcinoma . . . *Texas State Journal of Medicine* . . . December, 1948

Abuses and Uses of Des Stilbestrol in Obstetrics and Gynecology, with Further Report on Toxicity . . . *Texas State Journal of Medicine* . . . December, 1948

Splenic Aneurysm and Splenic Enlargement in Pregnancy . . . *British Medical Journal* . . . December 25, 1948

Calcified Cyst of Spleen . . . *British Medical Journal* . . . December 25, 1948

A Case of Pregnancy Complicated by a Uterus Didelphys . . . *Virginia Medical Monthly* . . . January, 1949

The Role of X-Ray Pelvimetry in Obstetrics . . . *Minnesota Medicine* . . . January, 1949

Amniotic Fluid and Meconium Embolism . . . *Minnesota Medicine* . . . January, 1949

Management of Occiput Posterior . . . *Journal of A.M.A.* . . . January 29, 1949

Physiologic Basis of Symptoms in Eclampsia . . . *California Medicine* . . . January, 1949

Poliomyelitis in Pregnancy . . . *California Medicine* . . . January, 1949

Modern Obstetrical Concepts and Their Effect on Obstetrical Procedures . . . *Journal of Osteopathy* . . . January, 1949

Inversion of the Uterus . . . *Rocky Mountain Medical Journal* . . . January, 1949

Panel Discussion on Obstetric Hemorrhage . . . *North Carolina Medical Journal* . . . January, 1949

Vaginal Hysterectomy . . . *Illinois Medical Journal* . . . January, 1949

Improper Use of Estrogens in Gynecology . . . *Pennsylvania Medical Journal* . . . January, 1949

Management of Excessive Weight Gain in Pregnancy . . . *Pennsylvania Medical Journal* . . . January, 1949

Modern Aspects of Pregnancy . . . *Journal of American Institute of Homeopathy* . . . February, 1949

ODONTOLOGY

Alveolectomy—Its Indications and Technique . . . *Ohio State Medical Journal* . . . December, 1948

Influence of Ascorbic Acid Salts and Orange Juice on Dental Enamel . . . *Current Medical Digest* . . . January, 1949

Fluorine and Dental Caries . . . *Illinois Medical Journal* . . . January, 1949

ONCOLOGY

Delays and Errors in the Diagnosis of Brain Tumor . . . *New England Journal of Medicine* . . . December 16, 1948

Color Reactions with Malignant Tumors . . . *Urologic and Cutaneous Review* . . . January, 1949

The Diagnosis of Metastatic Tumor by Cytological Examination of the Pericardial Fluid; Report of a Case Using Shorr's Stain . . . *Annals of Internal Medicine* . . . December, 1948

Tumor Seminar II . . . *Texas State Journal of Medicine* . . . December, 1948

Argument on Neural Tumors and Their Allies . . . *Edinburgh Medical Journal* . . . October, 1948

Small Bowel Tumors . . . *Virginia Medical Monthly* . . .

January, 1949
Neurogenic Tumors of Stomach . . . *British Journal of Surgery* . . . October, 1948
Testicular Tumors . . . *New York State Journal of Medicine* . . . February 1, 1949
Papillary Tumors of Thyroid Gland . . . *New York State Journal of Medicine* . . . February 1, 1949

OPHTHALMOLOGY

Anterior Synechiae Following Perforating Injuries . . . *Royal Society of Medicine* . . . November, 1948
Exfoliation of the Lens Capsule in Each Eye . . . *Royal Society of Medicine* . . . November, 1948
Emergency Eye Care in General Practice . . . *Journal of Michigan State Medical Society* . . . December, 1948
Treatment of Glaucoma . . . *Journal of A.M.A.* . . . January 8, 1949
Diagnosis and Treatment of Blepharoconjunctivitis . . . *Journal of the Iowa State Medical Society* . . . January, 1949

OSTEOLOGY

Discussion on Generalized Diseases of Bone in the Adult . . . *Royal Society of Medicine* . . . November, 1948
The Clinical Interpretation of Sternal Puncture . . . *Illinois Medical Journal* . . . December, 1948
Arthroplasties of the Hip . . . *New York State Journal of Medicine* . . . January 15, 1949
Osteochondritis Dissecans of the Talus in Recurrent Ankle Sprains . . . *New York State Journal of Medicine* . . . January 15, 1949
Recurrent Dislocation of the Patella: End Results Following Surgical Treatment . . . *New York State Journal of Medicine* . . . January 15, 1949
Calcareous Bursitis . . . *New York State Journal of Medicine* . . . January 15, 1949
Fractures of the Neck of the Femur . . . *Medical Journal of Australia* . . . November 20, 1948
Unicameral Cyst of the Calcaneus . . . *Virginia Medical Monthly* . . . January, 1949
Specific Treatment of Fractured Ankle . . . *New Orleans Medical and Surgical Journal* . . . January, 1949
Soft Tissue Changes That May Follow Postural Defects *Journal of American Osteopathic Association* . . . January, 1949

OTOLARYNGOLOGY

Infective Ear Disease in Factory Employees . . . *British Medical Journal* . . . December 18, 1948
Anesthesia in Otorhinolaryngology . . . *Hahnemannian Monthly* . . . December, 1948
Meniere's Disease . . . *Royal Society of Medicine* . . . November, 1948
Purulent Pachymeningitis . . . *Royal Society of Medicine* . . . November, 1948
Tests of Hearing . . . *Journal of Osteopathy* . . . January, 1949

PEDIATRICS

Histiocytic Reticulosis in Infants . . . *Medical Journal of Australia* . . . October 30, 1948
Pediatrics: Its Accomplishments and Obligations . . . *Southern Medical Journal* . . . January, 1949
Clinical Features of a Summer Disease (Three-day Fever) . . . *New Orleans Medical and Surgical Journal* . . . December, 1948
Consideration of Management of Child with Rheumatic Fever . . . *New Orleans Medical and Surgical Journal* . . . December, 1948
Electroencephalography in Childhood . . . *New Orleans Medical and Surgical Journal* . . . December, 1948
Postgraduate Education in Pediatrics for General Practitioners . . . *New Orleans Medical and Surgical Journal* . . . December, 1948
Advantages of Early Recognition and Treatment of Allergic Disorders in Infancy and Childhood . . . *New Orleans Medical and Surgical Journal* . . . December, 1948
Corrosive Esophagitis in Children . . . *New Orleans Medical and Surgical Journal* . . . December, 1948
Care of the Toxic Newborn . . . *New Orleans Medical and Surgical Journal* . . . December, 1948
The Roentgen Diagnosis of Otitis Media and Mastoiditis in Infancy and Early Childhood . . . *Pennsylvania Medical Journal* . . . December, 1948
Pollen Sensitivity in 100 Asthmatic Children . . . *New England Journal of Medicine* . . . December 30, 1948
Mechanism of Production of Acidosis in Premature Infants by Protein Milk . . . *American Journal of Diseases of Children* . . . May, 1948
Newer Concepts of Infant Feeding . . . *Medical Annals of D. C.* . . . January, 1949
Urethrography in Infants and Children . . . *Current Medical Digest* . . . January, 1949
The Care of Premature Infants in a Small Hospital . . . *Journal of the Iowa State Medical Society* . . . January, 1949
Cyanosis in Infants from Polluted Well Water . . . *Virginia Medical Monthly* . . . January, 1949
Foetal Mortality in Rural Hospital . . . *Journal of Medical Society of New Jersey* . . . January, 1949
Pediatric Surgery . . . *New Orleans Medical and Surgical Journal* . . . January, 1949
Metabolic Effects of Renal Insufficiency in Children . . . *California Medicine* . . . January, 1949
Acute Abdominal Conditions in Infancy . . . *North Carolina Medical Journal* . . . January, 1949
Feeding Problems in Infancy and Childhood . . . *Journal of Michigan State Medical Society* . . . January, 1949
Functional Systolic Murmurs in Children . . . *American Journal of Medical Sciences* . . . January, 1949

PHARMACOLOGY

Pharmacology and Biochemical Lesions . . . *Royal Society of Medicine* . . . November, 1948
"Aureomycin" a New Oraliy Effective Antibiotic . . . *Southern Medical Journal* . . . January, 1949
Combined Sodium "Pentothal" and Local Anesthesia for Selected Cases of Eye Surgery, with a Note on the Additional Use of Curare . . . *Southern Medical Journal* . . . January, 1949
Acetylcholine as a Pharmacological Agent . . . *Bulletin of Johns Hopkins Hospital* . . . December, 1948
The Newer Analgesic Drugs; Their Use and Abuse . . . *Annals of Internal Medicine* . . . December, 1948
Aureomycin—A New Antibiotic . . . *Annals of Internal Medicine* . . . December, 1948
Coramine in Barbiturate Poisoning: Comparison with Picrotoxin; Preliminary Report . . . *Annals of Internal Medicine* . . . December, 1948
Useful Drugs in Hypertension . . . *New York Physician*

DR. BARNES SANITARIUM

STAMFORD, CONNECTICUT

For treatment of Nervous and Mental Disorders, Alcoholism and Convalescents. Facilities for Shock Therapy. Accessible location in tranquil, beautiful hill country. Separate buildings.

Telephone 2–1621 F. H. BARNES, M.D., Med. Supt.

. . . January, 1949
Utilzation of Barbiturates . . . *Journal of A. M. A.* . . . January 15, 1949
Streptomycin-Sulphadiazine Treatment of Undulant Fever . . . *British Medical Journal* . . . December 25, 1948
Pneumococcal Pneumonia Treated with Aqueous Penicillin at Twelve-hour Intervals . . . *New England Journal of Medicine* . . . December 30, 1948
The Treatment of Venous Thrombosis with Heparin in Gelatin . . . *Ohio State Medical Journal* . . . January, 1949
The Use of Streptomycin in Tuberculosis . . . *Ohio State Medical Journal* . . . January, 1949
Treatment of Atypical Pneumonia with Aureomycin . . . *Journal of A.M.A.* . . . January 29, 1949
Comparison of Certain Actions of Demerol and Methadone . . . *California Medicine* . . . January, 1949
Clinical Observations with Fagarine . . . *Annals of Internal Medicine* . . . January, 1949
Clinical Intoxication with Potassium . . . *American Journal of Medical Sciences* . . . January, 1949
Effect of Para-Aminobenzoic Acid on Murine Typhus . . . *American Journal of Medical Sciences* . . . January, 1949

PSYCHIATRY

Ideational Motor Plan . . . *Journal of Nervous and Mental Disease* . . . November, 1948
Tetra-Ethyl Ammonium Chloride as an Adjunct in Treatment of Psychovisceral Manifestations of Anxiety . . . *Journal of Nervous and Mental Disease* . . . November, 1948
Alteration of Neurotic Pattern by Use of CO_2 Inhalations . . . *Journal of Nervous and Mental Disease* . . . November, 1948
Life Situations, Emotions and Bronchial Asthma . . . *Journal of Nervous and Mental Disease* . . . November, 1948
Severe Rigidity in Performance and Thought in a Case of Presenile Degenerative Disease . . . *Journal of Nervous and Mental Disease* . . . November, 1948
Autonomic Nervous System Changes Following Electric Shock Treatment . . . *Journal of Nervous and Mental Disease* . . . November, 1948
Variations of Body Weight and Menstruation in Mental Illness and Their Relation to Shock Treatments . . . *Journal of Nervous and Mental Disease* . . . November, 1948
Inclusion Bodies Associated with Destruction of Nerve Cells in Scrub Typhus, Psychoses and Multiple Sclerosis . . . *Journal of Nervous and Mental Disease* . . . November, 1948
The Management and Treatment of Psychopaths in a Special Institution in Denmark . . . *Royal Society of Medicine* . . . November, 1948
Myxedema and Psychosis, A Case Report . . . *Rhode Island Medical Journal* . . . December, 1948
Somatic Substitutive Reactions in Adolescents . . . *New Orleans Medical and Surgical Journal* . . . December, 1948
The Use of Testosterone in the Treatment of Depressions . . . *New England Journal of Medicine* . . . December 30, 1948
The Psychiatrist and the Clergyman . . . *Current Medical Digest* . . . January, 1949
Psychogenic Pain . . . *Edinburgh Medical Journal* . . . October, 1948
Psychiatric Aspects of Spontaneous Hypoglycemia . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Effort Syndrome and Low Back Pain . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Clinical Studies of Psychoses in Navy . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Psychotic Reactions Among Soldiers of World War II . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Studies of Finger Capillaries in Schizophrenia and Manic-Depressive Psychoses . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Wernicke's Disease . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Neurosurgical Lesions Diagnosed as Multiple Sclerosis . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Methyl Hydantoin in Treatment of Epilepsy . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Obesity Following Cerebral Injury . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Note on Basic Concepts of Psychotherapy . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Compulsive Neurotic Criminalism . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Physical and Mental Process Disease . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Homosexual Activity . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Psychopathologic Attitudes of Frustrated Previously Employed Mothers Toward Their Offspring . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Nature of Affective and Paranoid Disorders . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Healing Processes in Schizophrenia . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Alteration of Neurotic Pattern by Use of CO_2 Inhalations . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Rigidity in Performance and Thought in Case of Presenile Degenerative Disease . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Variations of Body Weight and Menstruation in Mental Illness and Their Relation to Shick Treatment . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Inclusion Bodies Associated with Destruction of Nerve Cells in Scrub Typhus, Psychoses and Multiple Sclerosis . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Study of Fasciculations . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Study of Relationship Between Constitutional Variations and Fundamental Psychotic Behavior Reactions . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Self-Inflicted Prefrontal Lobotomy . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Group Psychotherapy in State Hospital . . . *Journal of Nervous and Mental Disease* . . . December, 1948

"INTERPINES"
GOSHEN, N. Y.
Phone 117
ETHICAL—RELIABLE—SCIENTIFIC
Disorders of the Nervous System
BEAUTIFUL—QUIET—HOMELIKE—WRITE FOR BOOKLET
Frederick W. Seward, M.D., Director Frederick W. Seward, M.D., Resident Physician Clarence A. Potter, M.D., Resident Physician

Porencephaly in Institutional Epileptics . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Psychological Factors in Everyday Practice . . . *Rocky Mountain Medical Journal* . . . January, 1949

PSYCHOSOMATIC MEDICINE

Smith Ely Jelliffe: Father of Psychosomatic Medicine in America . . . *Psychoanalytic Review* . . . October, 1948
Psychosomatic Principles and Patterns in Disorders of the Special Senses . . . *Psychoanalytic Review* . . . October, 1948
Psychosomatic Problems in Surgical Practice . . . *Journal of American Osteopathic Association* . . . January, 1949

PULMONARY

Indications for Pulmonary Resection . . . *Texas State Journal of Medicine* . . . December, 1948
Postmortem Pneumothorax . . . *Diseases of the Chest* . . . January, 1949
The Pathogenesis of Primary Atypical Pneumonia . . . *Diseases of the Chest* . . . January, 1949
The Significance of Pleural Effusions as Indicating the Presence of Abdominal Disease . . . *Diseases of the Chest* . . . January, 1949
Pneumoperitoneum and Phreniclasia in the Treatment of Pulmonary Tuberculosis . . . *Diseases of the Chest* . . . January, 1949
Differential Diagnosis and Treatment of Congenital Cystic Malformation of Lung . . . *Diseases of the Chest* . . . January, 1949
Pulmonary Embolism: A Precipitating Factor of Acute Coronary Insufficiency . . . *Diseases of the Chest* . . . January, 1949
The Diagnosis and Treatment of Acute Laryngotracheobronchitis . . . *Diseases of the Chest* . . . January, 1949
Bronchography . . . *Diseases of the Chest* . . . January, 1949
Cavity Closure Following the Discontinuation of Ineffective Pneumothorax . . . *Diseases of the Chest* . . . January, 1949
Pleural Fibrin Body Simulating Cardiac Aneurysm . . . *Diseases of the Chest* . . . January, 1949
A New Mirror-Cannula for Laryngo-Tracheo-Tracheo-Bronchial Anesthesia, Medication, or Instillation of Opaque Oils . . . *Diseases of the Chest* . . . January, 1949
Sociedad Argentina de Tisiologia . . . *Diseases of the Chest* . . . January, 1949
Postoperative Pulmonary Complications . . . *Medical Journal of Australia* . . . November 13, 1948
Photofluorogram of N. C. Bureau of Tuberculosis Control . . . *North Carolina Medical Journal* . . . January, 1949
Pulmonary Edema . . . *Journal of Michigan State Medical Society* . . . January, 1949

RADIOLOGY

Mass X-Ray Examination Using Miniature Films . . . *Illinois Medical Journal* . . . December, 1948
Roentgen Ray Aspects of Malignancies of the Small Intestines . . . *Illinois Medical Journal* . . . December, 1948
The Roentgen Diagnosis of Otitis Media and Mastoiditis in Infancy and Early Childhood . . . *Pennsylvania Medical Journal* . . . December, 1948
Survey of Methods for Detection and Measurement of Ionizing Radiations . . . *Texas State Journal of Medicine* . . . December, 1948
Plain Roentgenogram of the Skull . . . *Texas State Journal of Medicine* . . . December, 1948
Accuracy of Roentgen Determination of Activity of Minimal Pulmonary Tuberculosis . . . *Current Medical Digest* . . . January, 1949
X-Ray Injuries: A Preventable Hazard . . . *Current Medical Digest* . . . January, 1949
The Role of X-Ray Pelvimetry in Obstetrics . . . *Minnesota Medicine* . . . January, 1949
Problems in Radiological Interpretation . . . *California Medicine* . . . January, 1949
Use of Compensating Filters . . . *X-Ray Technician* . . . January, 1949
Effect of Ionizing Radiations on Reproductive Cells and White Blood Cells . . . *X-Ray Technician* . . . January, 1949
Angiocardiography . . . *X-Ray Technician* . . . January, 1949
Roentgen Therapy . . . *Journal of Missouri State Medical Association* . . . February, 1949

RESPIRATORY

Neoplasms of the Upper Respiratory Tract . . . *Current Medical Digest* . . . January, 1949
Unusual Case of Foreign Body in Esophagus . . . *New Orleans Medical and Surgical Journal* . . . January, 1949

RHINOLOGY

Allergic Diseases and the Nose . . . *Medical Journal of Australia* . . . October 30, 1948
Recent Progress in Nasal Physiology . . . *Royal Society of Medicine* . . . November, 1948
The Nasal Mucous Membrane in Relation to the Lymph Stream and Cerebrospinal Fluid . . . *Royal Society of Medicine* . . . November, 1948
Treatment of Infection of Frontal Sinuses and Complications . . . *Illinois Medical Journal* . . . January, 1949

SKULL, BRAIN, SPINE, AND SPINAL CORD

Tonsilectomy and Poliomyelitis in Cuyahoga County, Ohio *Ohio State Medical Journal* . . . December, 1948
Delays and Errors in the Diagnosis of Brain Tumor . . . *New England Journal of Medicine* . . . December 16, 1948
Fertility Studies in the Human Male with Traumatic Injuries of the Spinal Cord and Cauda Equina . . . *New England Journal of Medicine* . . . December 16, 1948
Recent Concepts Regarding the Spread and Treatment of Poliomyelitis . . . *New England Journal of Medicine* . . . December 23, 1948
Plain Roentgenogram of the Skull . . . *Texas State Journal of Medicine* . . . December, 1948
Obesity Following Cerebral Injury . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Spinal Fluid Sugar in Subarachnoid Hemorrhage . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Dissociation Between Pain and Temperature in Spinal Cord Lesions . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Herniated Disc Simulating Cord Tumor . . . *Journal of Nervous and Mental Disease* . . . December, 1948
Chronic Headache . . . *Journal of A.M.A.* . . . January, 22 1949
Therapy of Migraine . . . *Journal of A.M.A.* . . . January 22, 1949
Headaches, Tics and Neuralgias of the Head . . . *Northwest Medicine* . . . January, 1949
Problems in Natural History of Poliomyelitis . . . *Annals of Internal Medicine* . . . January, 1949
Diagnosis of Acute Anterior Poliomyelitis . . . *Journal of Michigan State Medical Society* . . . January, 1949
First Aid to Patients with Head or Spine Injuries . . . *Journal of Michigan State Medical Society* . . . January, 1949

SURGERY

Nutritional Problems in Surgical Patients with Special Reference to Depletion of Plasma Protein Reserves . . . *Ohio State Medical Journal* . . . December, 1948
Recent Advances in Plastic Surgery of the Face . . . *Ohio State Medical Journal* . . . December, 1948
A Brief Materia Medica with Surgical Indications . . . *Journal of American Institute of Homeopathy* . . . January, 1949
A Critique on Vagotomy, Part II. The Contemporary Use of Vagotomy . . . *American Journal of Digestive Diseases* . . . January, 1949
Follow-up Studies of Patients with Pre-Frontal Lobe Lobotomy . . . *Illinois Medical Journal* . . . December, 1948
Cervical Sympathetic and Stellate Ganglion Block in Apoplexy . . . *Journal of Michigan State Medical Society* . . . December, 1948
Surgical Therapy in Gastroduodenal Ulcer . . . *Review of Gastroenterology* . . . January, 1949
Surgical Aspect of Congenital Heart Disease . . . *Southern Medicine and Surgery* . . . December, 1948
Some Favorable Results in the Radical Surgical Attack Upon Advanced So-called Inoperable Abdominal Cancer . . . *Southern Medicine and Surgery* . . . December, 1948
Recent Advances in Pre- and Postoperative Care . . . *Pennsylvania Medical Journal* . . . December, 1948
E. H. Embley Memorial Lecture—Anesthesia and the Role of the Anesthetist in the Surgery of the Thyroid Gland . . . *Medical Journal of Australia* . . . November 13, 1948

Early Postoperative Ambulation . . . *Clinical Medicine* . . . December, 1948
The Conservative and Surgical Management of Ethmoid and Sphenoid Sinusitis . . . *New York State Journal of Medicine* . . . January 15, 1949
Urologic Manifestations of Acute Appendicitis . . . *New York State Journal of Medicine* . . . January 15, 1949
Surgery of the Veins of the Lower Extremity . . . *Minnesota Medicine* . . . January, 1949
Radical Mastectomy . . . *British Journal of Surgery* . . . October, 1948
Pulmonary Resection for Metastatic Malignancy . . . *British Journal of Surgery* . . . October, 1948
Surgical Management of Uterine Retrodisplacement . . . *New Orleans Medical and Surgical Journal* . . . January, 1949
Pediatric Surgery . . . *New Orleans Medical and Surgical Journal* . . . January, 1949
Surgical Treatment of Advanced Elephantiasis . . . *Journal of Osteopathy* . . . January, 1949
Continuous Peridural and Caudal Analgesia in Surgery and Early Ambulation . . . *Northwest Medicine* . . . January, 1949
Surgery of the Esophagus . . . *North Carolina Medical Journal* . . . January, 1949
Control of Electrolyte and Water Balance in Surgical Patients . . . *North Carolina Medical Journal* . . . January, 1949
Surgical Treatment of Irradiation Injuries . . . *Illinois Medical Journal* . . . January, 1949
Diagnosis of Acute Surgical Conditions of the Abdomen . . . *Pennsylvania Medical Journal* . . . January, 1949

TUBERCULOSIS

Tuberculosis and the General Practitioner . . . *Texas State Journal of Medicine* . . . December, 1948
The Early Tuberculous Pulmonary Lesion and Its Management . . . *Texas State Journal of Medicine* . . . December, 1948
Tuberculosis Control Program of Nine California Mental Institutions. Results of Initial Chest X-Ray Survey . . . *Public Health Reports* . . . January 7, 1949
The Use of Streptomycin in Tuberculosis . . . *Ohio State Medical Journal* . . . January, 1949
Accuracy of Roentgen Determination of Activity of Minimal Pulmonary Tuberculosis . . . *Current Medical Digest* . . . January, 1949
Streptomycin in Tuberculous Enteritis . . . *American Journal of Medical Sciences* . . . January, 1949

UROLOGY

Urethrostomy Drainage of the Bladder . . . *Royal Society of Medicine* . . . November, 1948
Transverse Abdominal Incision for Transperitoneal Nephrectomy . . . *Urologic and Cutaneous Review* . . . January, 1949
Ureterocele: A Case Treated by Transurethral Resection . . . *Urologic and Cutaneous Review* . . . January, 1949
Channeled Urethral Stone . . . *Urologic and Cutaneous Review* . . . January, 1949
Calculous Disease of the Kidney and Urinary Tract . . . *Urologic and Cutaneous Review* . . . January, 1949
Dietary and Occupational Considerations in the Treatment of Urogenital Disorders . . . *Urologic and Cutaneous Review* . . . January, 1949
Chronic Urethritis in Women . . . *Journal of Michigan State Medical Society* . . . December, 1948
Osteitis Pubis . . . *New York State Journal of Medicine* . . . January 15, 1949
Frequency of Urination in Women . . . *Illinois Medical Journal* . . . January, 1949

VIRUS

Concurrent Infection with Influenza Virus and Mumps Virus or Pneumonia Virus of Mice as Bearing on the Inhibition of Virus Multiplication by Bacterial Polysaccharides . . . *Journal of Experimental Medicine* . . . January 1, 1949
Myositis in Mice Following Intramuscular Injection of Viruses of the Mouse Encephalomyelitis Group and of Certain Other Neurotropic Viruses . . . *Journal of Experimental Medicine* . . . January 1, 1949
An Outbreak of Newcastle Virus Disease in Tuscarawas County, Ohio . . . *Ohio State Medical Journal* . . . January, 1949
Mumps Encephalitis . . . *Journal of Iowa State Medical Society* . . . January, 1949

Before the Patient Becomes Seriously Ill

The use of GRAY'S COMPOUND will save valuable time and effort in the restoration of your patient to his normal health.

Gray's Compound

stimulates the appetite and aids in the assimilation of nourishment. If the patient is "run down" from overwork, worry, seasonal colds and coughs, or suffers from the vague symptoms of old age and diminishing vitality, GRAY'S COMPOUND is usually indicated, and is a useful adjunct to such other medications as the case may indicate.

The active ingredients are: Extracts Gentian and Dandelion, Glycerine, Wine, Phosphoric Acid, Cardamom Comp. and Sugars.

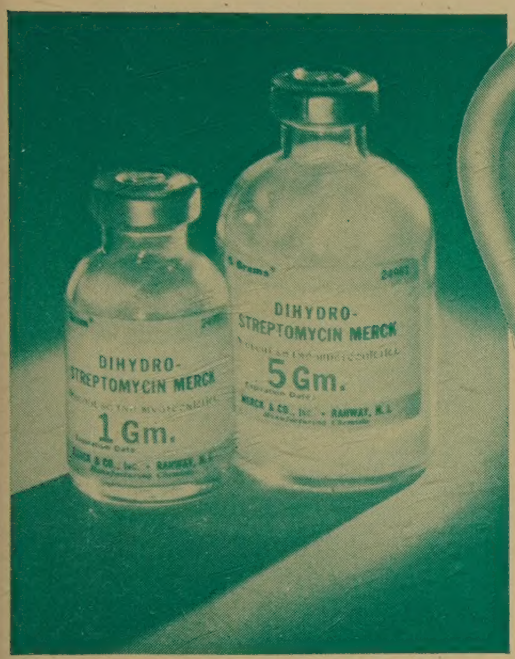
THE PURDUE FREDERICK CO.
135 Christopher Street **New York 14, N. Y.**

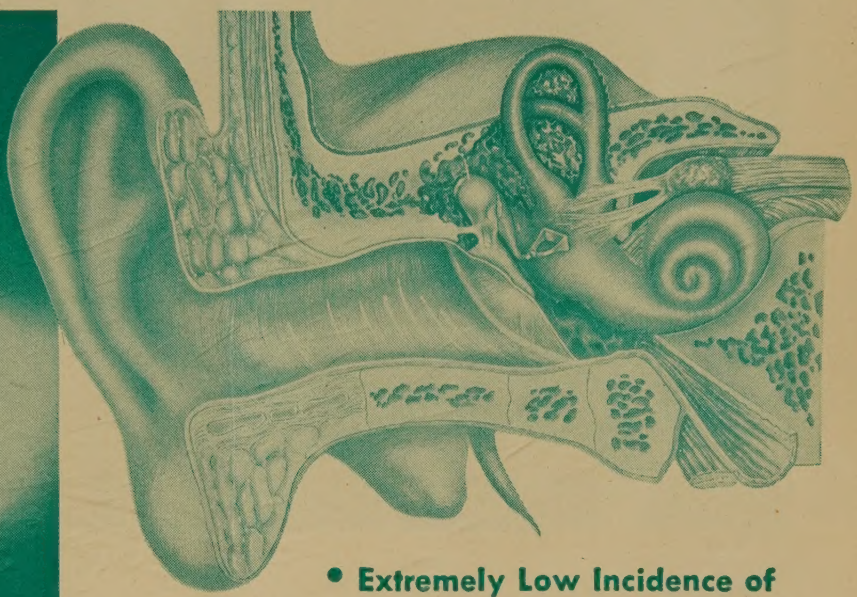
(Also Compounders of Hyperol, a Utero-Ovarian Tonic)

Announcing...

DIHYDROSTREPTOMYCIN

A New, Dramatic Advance In Antibiotic Therapy





- **Extremely Low Incidence of Vestibular Disturbances**

- **Less Frequent Allergic Manifestations**
- **Unsurpassed Purity**
- **Undiminished Antibacterial Activity against *Mycobacterium tuberculosis***

Dihydrostreptomycin Merck is a new, highly purified antibiotic, chemically distinct from streptomycin, and characterized by greatly reduced neurotoxicity.

Allergic manifestations due to dihydrostreptomycin therapy are rare, and no local skin irritation or other allergic phenomena have been reported thus far among personnel who frequently handle this drug.

Dihydrostreptomycin Merck and Streptomycin Calcium Chloride Complex Merck may be used interchangeably in the treatment of tuberculosis.

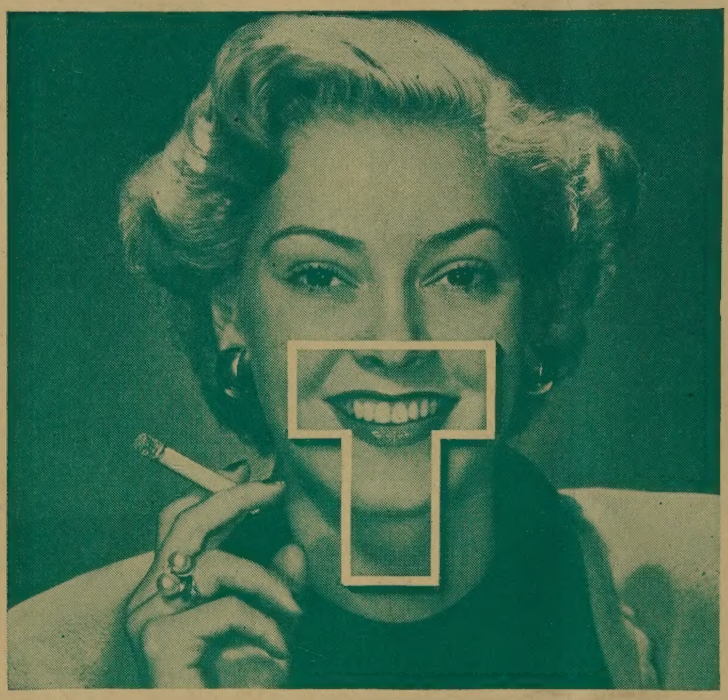
DIHYDROSTREPTOMYCIN MERCK

(supplied as the sulfate or the hydrochloride)

MERCK

MERCK & CO., Inc. *Manufacturing Chemists* **RAHWAY, N. J.**

How mild can a cigarette be?



In a recent coast-to-coast test, hundreds of men and women smoked Camels—and only Camels—for 30 consecutive days. These people smoked on the average of one to two packages of Camels a day during the entire test period. Each week, throat specialists examined these Camel smokers. A total of 2,470 careful examinations were made by these doctors. After studying the results of the weekly examinations, these throat specialists reported:

"NOT ONE SINGLE CASE OF THROAT IRRITATION DUE TO SMOKING CAMELS!"

Money-Back Guarantee!

Test Camel mildness for yourself in your own "T-Zone." T for taste, T for throat. If, at any time, you are not convinced that Camels are the mildest cigarette you've ever smoked, return the package with the unused Camels and we will refund its full purchase price, plus postage. *(Signed)* R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina.

According to a Nationwide survey:

MORE DOCTORS SMOKE CAMELS

than any other cigarette

Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!